

U.S.I. JOURNAL

INDIA'S OLDEST JOURNAL ON DEFENCE AFFAIRS

(Established : 1870)



PRINCIPAL CONTENTS

- Peace Keeping in Sri Lanka - *Lt Gen A M Vohra PVSM (Retd)*
- Soviet Initiatives for Asia-Pacific Security and India - *Brig D Banerjee*
- Indian Naval Development - *Vice Admiral Subimal Mookerjee, PVSM, AVSM (Retd)*
Need for Review
- Is the IAF A Tactical Air Force? - *Wg Cdr P Khokhar, VM*
- Political Power in the Nuclear Age - *Dr Jai Narain*

APRIL - JUNE 1989

ALL RIGHTS RESERVED © Rs.20.00 PUBLISHED QUARTERLY

USI

(Estd. 1870)

OUR ACTIVITIES

Library Service

One of the oldest and finest military libraries in India, today it has over 50,000 books, and journals on its shelves, including books published in the 17th, 18th and 19th centuries, on an astonishing variety of subjects. While the principal emphasis is on strategy and defence, there are a large number of works on different facets of Indian life, as well as on other countries. It is a store house of rare books and manuscripts for scholars and research workers devoted to political and military study.

Correspondence Courses

The introduction of Correspondence Courses for promotion and Defence Service Staff College examinations some years ago found ready response and today the Institution has 1,500 members who participate in the Training Courses annually. Material is despatched to them regularly wherever they may be.

The students have undoubtedly profited by these courses, as evidenced by the success achieved by them in these Examinations. Popularity apart, the courses contribute substantially to the revenue of the USI.

USI Journal

Oldest Defence Journal in India, it contains proceedings of lectures and discussions, prize essays, original articles, book reviews, etc.

It is published quarterly in April, July, October and January each year (the first issue being Jan-Mar each year). The Journal is supplied free to members. It provides a forum for the most junior officer to express his opinions relating to his profession.

Gold Medal Essay Competitions

The gold medal essay competition is held every year. The subject for essay is announced during the month of March each year. On the occasion of the Centenary, an additional Gold Medal Essay Competition has been instituted for Junior Officers of not more than ten years' service.

Lectures and Discussions

A series of lectures by outstanding experts on service, international affairs and topics of general interest to the Services are organised for the benefit of Local Members in Delhi.

MacGregor Medal

This medal is awarded every year to officers for any valuable reconnaissance they may have undertaken.

Rules of Membership

1. All officers of the Defence Services and all Central Services Gazetted officers Class I (including Retired), Cadets from NDA, other Services' Academies and Midshipmen shall be entitled to become members on payment of the entrance fee and subscription.
2. Life Members of the Institution shall be admitted on payment of Rs. 500/- which sum includes entrance fee.
3. Ordinary Members of the Institution shall be admitted on payment of an entrance fee of Rs. 50/- on joining and an annual subscription of Rs. 50/- to be paid in advance.
4. The Ordinary Members who have paid subscription continuously for five years are eligible to convert their ordinary membership into Life Membership by paying Rs. 350/- only.
5. The period of subscription commences on 1 April each year and shall be operative till 31 March of the following year.

For further particulars, please write to Director, USI of India, Kashmir House, Rajaji Marg, New Delhi-110011.

ISSN 0041-770X

The
Journal
of the
United Service Institution
of
India

Published by Authority of the Council



(Established : 1870)

Postal Address:

KASHMIR HOUSE, RAJAJI MARG, NEW DELHI-110011

Telephone No 3015828

Vol CXIX

APRIL-JUNE 1989

No. 496

USI Journal is published Quarterly in April, July, October and January.
Subscription per annum: In India Rs. 80.00 Foreign £10.50 or \$ 20.00 by Sea
Mail. Subscription should be sent to the Director. It is supplied free to the
members of the Institution. Articles, Correspondence and Books for Review
should be sent to the Editor. Advertisement enquiries concerning space should
be sent to the Director.

**UNITED
SERVICE
INSTITUTION
OF INDIA**

for

*the furtherance of
interest and know-
ledge in the art,
science and literature
of National Security
in general and of the
Defence Services
in particular*

Director

Maj Gen SCSinha,
PVSM (Retd)

Dy Director & Editor

Air Cmde N B Singh,
MA, IAF (Retd)

Dy Director (Admin)

Brig G L Sachdeva
(Retd)

Chief Instructor

Lt Col P K Dhawan

Librarian

Mr O S Sachdeva

Accountant

Mr S L Bhalla

Patron

The President of India

Vice-Patron

Governor of Andhra Pradesh

Governor of Arunachal Pradesh

Governor of Assam, Meghalaya

Governor of Bihar

Governor of Goa, Daman and Diu

Governor of Gujarat

Governor of Haryana

Governor of Himachal Pradesh

Governor of Jammu & Kashmir

Governor of Karnataka

Governor of Kerala

Governor of Madhya Pradesh

Governor of Mizoram

Governor of Nagaland, Manipur and Tripura

Governor of Orissa

Governor of Punjab

Governor of Rajasthan

Governor of Sikkim

Governor of Tamil Nadu

Governor of Uttar Pradesh

Governor of West Bengal

Lt Governor of Delhi

Lt Governor of Pondicherry

Minister of Defence

Gen VN Sharma, PVSM, AVSM, Chief of the Army Staff

Admiral J G Nadkarni, PVSM, AVSM, NM, Chief of the Naval Staff

Air Chief Marshal S K Mehra PVSM, AVSM, VM, ADC, Chief of the Air Staff

President

Air Marshal NC Suri, PVSM, AVSM, VM, ADC, Vice Chief of the Air Staff

Vice Presidents

Vice Admiral SC Chopra, PVSM, AVSM, NM, ADC, Vice Chief of the Naval Staff

Lt Gen VK Sood, PVSM, AVSM, Vice Chief of the Army Staff

Ex-Officio Members

Shri Naresh Chandra, *Secretary, Ministry of Defence*

Lt Gen MA Zaki, AVSM, Vrc, *Director General Military Training*

Air Vice-Marshal M Banerji, MVC, VM, *Director of Training, Air HQ*

Commodore G Rai, NM, VSM, *Director of Naval Training*

Elected Members of the Council

Lt Gen ZC Bakshi, PVSM, MVC, Vrc, VSM (Retd)

Lt Gen (Dr) ML Chibber, PVSM, AVSM, PhD (Retd)

Brig NB Grant, AVSM (Retd)

Lt Gen JFR Jacob, PVSM (Retd)

Lt Gen SP Malhotra, PVSM (Retd)

Vice Admiral S Mookerji, PVSM, AVSM (Retd)

Vice Admiral KK Nayyar, PVSM (Retd)

Lt Gen SF Rodrigues, PVSM, VSM, ADC

Lt Gen AM Sethna, PVSM, AVSM (Retd)

Lt Gen Harbaksh Singh, Vrc (Retd)

Air Commodore Jasjit Singh, AVSM, Vrc, VM

Lt Gen RK Jasbir Singh, PVSM (Retd)

Lt Gen M L Thapan, PVSM (Retd)

Lt Gen M Thomas, PVSM, AVSM, VSM (Retd)

Executive Committee

Lt Gen MA Zaki, AVSM, Vrc, *Director General Military Training*

Air Vice Marshal M Banerji MVC, VM, *Director of Training, Air HQ*

Commodore G Rai, NM, VSM, *Director of Naval Training*

Lt Gen Z C Bakshi, PVSM, MVC, Vrc, VSM (Retd)

Lt Gen JFR Jacob, PVSM (Retd)

Vice Admiral S Mookerjee, PVSM, AVSM (Retd)

Vice Admiral K K Nayyar, PVSM, AVSM (Retd)

Air Commodore Jasjit Singh, AVSM, Vrc, VM

CONTENTS

Editorial.....	131
Peace Keeping in Sri Lanka	
Lieutenant General A M Vohra, PVSM (Retd).....	132
Soviet Initiatives for Asia-Pacific Security and India	
Brig D Banerjee.....	138
Indian Naval Development - Need for Review	
Vice Admiral Subimal Mookerjee, PVSM, AVSM (Retd).....	151
Is the IAF A Tactical Air Force?	
Wg Cdr P Khokhar, VM.....	158
Political Power in the Nuclear Age	
Dr Jai Narain.....	163
Nuclear Weapons and National Security	
Lt Colonel A A Athale.....	169
Star Wars and Countermeasures	
Commodore B K Dattamajumdar, VSM.....	179
Limits of Power: The US Military in Vietnam	
Phillip A Aittenborough.....	188
Micrographics in Defence	
Brig TV Manoharan, VSM.....	198
The Colonel Commandant Syndrome	
Brig N B Grant AVSM (Retd).....	203
Be It Ever So Humble....	
Rajni Lamba.....	206
Human Aspect of the Indian Soldier	
Maj General Virendra Singh (Retd).....	208
Cantonments: Colonial Relics or Military Necessities	
Lt Gen E A Vas PVSM (Retd).....	213
Have A Large Beer	
Raj Bir Chopra.....	219
REVIEW ARTICLES	
Medium Naval Power Strategy	
Vice Admiral Mihir K Roy PVSM, AVSM (Retd).....	221

Unconventional Warfare	
Maj General SC Sinha, PVSM (Retd).....	224
BOOK REVIEWS	
International Security Year Book 1984-85	
Col K Rama Rao AVSM (Retd).....	227
American Sea Power & Global Strategy	
Captain R P Khanna, AVSM, IN (Retd).....	228
The Defense Game: An Insider Explores the Astonishing Realities of America's Defense Establishment	
Maj Gen S K Talwar.....	229
A Fortunate Soldier	
Maj Gen B D Kale.....	230
Soviet Ground Forces: An operational Assessment	
"Tindi".....	231
Sino-Soviet Relations: Re-examining the Prospects for Normalization	
Brig M M Walia.....	233
Diplomacy and Intelligence During the Second World War: Essays in Honour of F H Hinsley	
Maj General R L Chopra, PVSM (Retd).....	234
Intelligence Chief Extraordinary: The Life of the Ninth Duke of Portland	
Brig S K Issar, VSM.....	234
Rogue Warrior of the SAS, Lt Col 'Paddy' Blair Mayne, DSO (3Bars), Croix De Guerre, Legion D'Honneur	
Lt Gen M L Thapan PVSM (Retd).....	236
From OSS to Green Berets: The Birth of Special Forces	
Col R R Chatterji.....	237
The Perfect War: Techno War in Vietnam	
Lt Gen P E Menon, PVSM (Retd).....	238
The Arab Military Option	
Maj Gen Afsir Karim AVSM.....	240
The United States and Ballistic Missile Defence: ABM and SDI	
N B S.....	241
Letters to the Editor.....	243
Additions to the USI Library.....	244

NOTE

"The views expressed in the Journal are in no sense official and the opinions of contributors and the Editor in their published articles are not necessarily those of the Council of Institution".

Regional Concerns

The IPKF has been in Sri Lanka now for almost two years. It was sent there at the request of President Julius Jayewardene under Indo-Sri Lanka Accord. Now President Ranasinghe Premadasa has called for the withdrawal of the IPKF from Sri Lanka by July 1989. In the lead article in this issue, Lt Gen AM Vohra highlights problems and achievements of the IPKF.

In the wider regional perspective, Soviet President Mikhail Gorbachev's visit to China and his meeting with the Chinese leader Deng Xiaoping was, perhaps, the most important land-mark in the history of Asia Pacific Region in the present decade.

In the West, President Gorbachev's peace initiative has already resulted in the INF Treaty as well as more meaningful negotiations for reduction in strategic weapons and conventional forces. Sino-Soviet agreements on the border dispute and demilitarisation of border areas set a new precedent for solving various other border disputes in this region. Implications of the Sino-Soviet detente on the geo-strategic situation in the region and its effect on the countries of South Asia is assessed by Brig D Banerjee in the second article.

Of special interest will be the article by Vice Admiral S Mookerjee on Aircraft Carriers vs Submarines for future re-equipment of the Indian Navy. Not only the Navy, but the Army and the Air Force should be so structured that with weapon systems they have, they can meet and overcome threats to national security at the minimum cost. But this is possible only if threats that are likely to arise are clearly visualised and steps taken to acquire "sufficient defensive capability" to counter them. Reactions to Admiral Mookerjee's article would be welcome for publication in the Journal.

Peace Keeping in Sri Lanka

LT GEN A M VOHRA PVSM

On January 1, the day before Mr. Ransinghe Premadasa was sworn in as the President of Sri Lanka, the withdrawal of two battalions of the Indian Peace Keeping Force (IPKF) to be completed in the first half of the month, was announced. It has been reported that Mr Premadasa has taken note of the improved situation in the north-east province and is anxious that the withdrawal does not affect the fears and apprehensions of the Tamil people.

This withdrawal is in keeping with the United National Party's manifesto for the Presidential election which commended the Indo-Sri Lanka peace accord and promised to bring about "immediate or phased withdrawal of the IPKF on attaining normalcy in north and east".

The IPKF is about 50,000 strong and consists of the better part of four divisions. Pruning of the force is now desirable and the Government of India, should welcome a phased withdrawal of its Army's strategic reserve. The infrastructure of the LTTE (Liberation Tigers of Tamil Elam) has been delivered some heavy knocks and their ability to contest issues militarily has been shattered. Low intensity insurgency continues and this can be kept under control by a very much reduced strength now that provincial elections have been held and an elected government installed.

India's role in helping Sri Lanka find a political solution to the ethnic problem in general and the induction of the IPKF in particular has come in for a great deal of comment and criticism. A brief review of this role and an appraisal of the IPKF is therefore called for.

INDIA'S ROLE

The demand for a separate state in the northern and eastern parts of Sri Lanka by the Tamils of that country required a political solution. The Tamils constitute 12.5 per cent of the population of the Island state and form the majority in the northern and eastern districts. Riots had erupted in 1977, 1981 and again in July 1983. Over a period of time, a number of militant groups had come up of which the LTTE was the most predominant. Severe military measures by the Sri Lankan Government could not control insurgency and the LTTE were literally in control of the Jaffna peninsula. The situation was ripe for interference by extra regional powers. In fact president Jayewardene is reported to have approached the USA, the UK, Pakistan and Bangladesh for help in July 1983. Geopolitically, it was in the regional inter-

est that the existing state system in South Asia should not be disturbed; the unity and integrity of Sri Lanka had to be preserved. It was also necessary to ensure that Sri Lanka retains its non-aligned status and is not forced into the lap of a super power.

Secondly, the killings as a result of riots, insurgency and counter - insurgency, in the Tamil areas of Sri Lanka, could have produced a serious backlash in Tamil Nadu. India was therefore concerned that a political solution be found to Sri Lanka's ethnic problem. Unfortunately, until after the first round of Thimpu talks in July 1985, Sri Lanka had serious misgivings and did not correctly perceive Indian objectives mentioned above. This was understandable as the Tamil militants had bases in Tamil Nadu where they conducted training and collected funds. Prime Minister Rajiv Gandhi's categorical statement at a news conference in July 1985 helped to clear the air. Referring to the constitutional arrangements for the Tamils in Sri Lanka, he said, "we will not support anything more than what is available in India".

Dialogue for a political solution between the two Governments started soon after the July 1983 riots and was protracted as the Sri Lanka government offered nothing more than District Development Councils (DDCs). Equally, occasionally, it entertained the futile hope of a military solution. Therefore killing and counter killings continued. After the failure of the Round Table Conference convened on 21 Sep 84, the moderate TULF (Tamil United Liberation Front) put forward a demand for a regional council embracing the northern and eastern Tamil predominant areas. Government of India (GOI) supported a solution based on provincial autonomy and the leader of the Sri Lankan delegation to Thimpu, Mr Hector Jayewardene, spent over a week in Delhi from Aug 22 to 30, 1985 studying the Indian system. However, it took the GOI almost two years to get provincial councils accepted in the Indo-Sri Lanka Agreement signed on 29 July 1987.

THE AGREEMENT

The agreement accepted one administrative unit, the provincial council, for the north-eastern province subject to a subsequent referendum in which the eastern province would decide whether to remain linked or to constitute a separate provincial council. The devolution of power to the provincial council was to be on the basis of three lists on the Indian pattern.

Hostilities were to cease on 31 July 1987 and the militants were required to surrender arms. General amnesty was to be granted to the insurgents including those held in custody. The responsibility for their rehabilita-

tion was accepted. It was agreed that the GOI would provide a peace keeping force to enforce the cessation of hostilities, accept the surrender of weapons and to ensure the security of all communities.

The accord was hailed internationally by the USA, USSR, Algeria, Australia, Bangladesh, the EEC and Netherlands. The Sri Lankan Tamil groups, except the LTTE, welcomed it. Soon after the signing of the agreement, Prabhakaran, the LTTE Chief, expressed serious misgivings. However, the militants did commence surrendering arms. On 2 Aug '87, TELO (Tamil Elam Liberation Organisation) handed over 75 weapons. On August 4, Prabhakaran announced the decision of the LTTE to hand over arms and his cadres handed over 488 weapons subsequently. However, his intention to continue militancy soon became apparent.

PEACE KEEPING OPERATIONS

The induction of the IPKF began on July 29, 1987. By August 4, about one division was deployed; one brigade in Jaffna peninsula, one in area Mannar - Vavuniya - Mullaitivu and one in area Trincomalee - Batticaloa - Amparai. Apart from the task of giving protection to all communities, it established contacts with the militants to facilitate peaceful handing over of arms. The LTTE held back bulk of its weapons and used these to establish its dominance over other groups, in particular, the TELO, so as to spread its influence in the eastern areas. By September 21, it had killed at least 200 people in attacks on rival groups.

The LTTE forcibly closed police stations and started interfering with the operations of the IPKF by, for instance, deploying school children and girls to stop the movement of their vehicles. At the same time it kept a dialogue going for the formation of an interim administrative council in which it was offered 7 out of 12 seats including that of the chief administrator. Its diabolical game forced the IPKF to commence military operations to restore as near a state of normalcy in the north and the east, as possible. On October 7, the LTTE's Radio and TV stations were seized. In a pre-dawn sweep on October 9, the IPKF raided militant camps in the north and the east and apprehended over 200 of them.

The strength of the LTTE cadres at that time was assessed as 1500. This force was supported by 3000 "podiyans" (informers and helpers) making a total of about 4500, armed with about 1400 rifles mostly of the AK 47 and 7.62 SLR variety, about 200 pistols and carbines, over 100 machine guns, a number of mortars and grenade launchers. As mentioned earlier, 488 weapons were surrendered but, consignments have continued to be received and

young Tamils have continued to be recruited. Affluent Tamil groups abroad continue to provide funds and the world arms bazar is full of all kinds of weapons sold at a price. Equally, it is impossible to prevent small fishing boats getting through all the vigilance established by the Navy.

From one division inducted initially, the IPKF strength was built up to the better part of four divisions, that is excluding armour, of which only one regiment was inducted and artillery, of which only four regiments were inducted. Thus a strength of about 50,000 formed part of the IPKF. Its flushing operations commenced in the Jaffna peninsula; where the LTTE were literally in command, on October 10. By October 14, the siege of Jaffna was broken after heavy fighting around the old Dutch fort, the University area and at Urumpirai where the LTTE fought from houses. On October 18, the IPKF had flushed the Jaffna town. In these operations 507 militants and 86 personnel of the IPKF were killed. On October 20, leaflets were dropped by air offering amnesty to those militants who surrender their weapons. However, a large number moved into the forests of Vani and the eastern province.

The IPKF deployment was adjusted to one division in the Jaffna peninsula and one each in the Vavuniya, Trincomalee and Batticaloa sectors. Flushing operations continued and casualties mounted; an estimated 753 LTTE cadres were killed by October 30 and the IPKF lost 15 officers, 14 JCOs and 185 other ranks. The LTTE operated from their jungle hide-outs attacking stray vehicles, ambushing patrols and planting mines as well as improvised explosive devices (IED). On November 20, an unilateral ceasefire for 48 hours was announced by the IPKF commencing November 21, offering an opportunity to the LTTE to hand over their arms and support the agreement. However, there was no response and operations were resumed. Apart from incidents of mine blasts and IED, the LTTE attacked unarmed civilians of the minority community in the eastern province. The rampage during night of December 30-31 at Kattakundy near Batticaloa resulted in 25 villagers being killed; 8 were wounded and 11 were abducted. Throughout the year 1988, incidents of the type mentioned above against the IPKF and civilians have continued. The IPKF have maintained pressure and even though the tempo decreased from about mid January 1988, low level insurgency continued. The casualty figures as on December 1, 1988 had risen to 678 IPKF personnel killed, the assessed figure of the LTTE cadres killed upto that date is 1765.

APPRAISAL

On the face of it a military force more than 10 times as strong as the LTTE should have been able to make a short work of the militants. However,

dealing with insurgents is a complicated matter. Firstly, the insurgents are not treated as enemy against whom no holds are barred. They are considered own people who have gone astray and have taken up arms against the government. Therefore, one guiding principle when operating against them is that of applying the minimum force. Secondly, insurgents operate with the sympathy and support of the locals, who provide them shelter, food as well as funds and information. It is therefore necessary for the troops deployed against them to win the minds and hearts of the people of the region and create an environment in which the militants become amenable to a political solution through negotiation.

With this in mind and the fact that LTTE was involved in the negotiation of the agreement, had actually handed a largish number of arms and were holding a dialogue for the establishment of an interim administrative council, it was the IPKF's endeavour to facilitate the implementation of the political solution envisaged in the agreement. The IPKF was, however, compelled to use force when it became clear that the LTTE would do all it could to impede the accord.

The obliteration of insurgents is not a military possibility for reasons discussed above. It is however, possible to make insurgency irrelevant by a political solution; to make it ineffective militarily and let it efface itself gradually as is happening in Nagaland and Mizoram. The IPKF has achieved these objectives in the North-Eastern province of Sri Lanka. Given the satisfactory devolution of power to the elected council, the insurgency will fizzle out in course of time.

Let us also look at some other aspects of the IPKF's activities. During its initial flushing operations, 375,000 Jaffna residents sought refuge in Schools and temples under the protection of the IPKF. After these operations in October 1987, administrative normalcy was brought about by the IPKF by restoring or providing supply of water, electricity and communications, food supplies and medical facilities. In due course banks, courts, post and telegraph offices, hospitals as well as educational institutions were re-activated. All communities have been provided protection. However stray incidents of killing of civilians have taken place throughout 1988 and are likely to continue this year also. This is a serious matter indeed but one of reducing frequency and ultimate disappearance.

India's participation in the process of finding a political solution of Sri Lanka's ethnic problem was inevitable particularly as the militants would not enter into direct dialogue with the Sri Lankan government and wanted GOI

to negotiate. The agreement ultimately arrived at was the best possible under the circumstances safeguarding Tamil aspirations as well as the unity and integrity of Sri Lanka.

The Tamils had lost faith in Sri Lanka's security forces and the police. Thus the induction of the IPKF was a necessity. Its operations have created near normalcy and made the holding of elections possible even if the intimidation caused by the LTTE prevented the participation of the TULF and resort to a single candidate list for the northern districts. The turn out in the eastern districts was, however, over 60%.

The elected government needs security against the LTTE. Until such time that local arrangements can be made to provide this and ensure that the writ of the established authority is not challenged by militants, the presence of the IPKF is essential. The agreed political arrangements would need time to stabilize. The pruning of the strength of the IPKF and its phased withdrawal should also be progressed accordingly.

Soviet Initiatives for Asia-Pacific Security and India*

BRIG D BANERJEE

On Jul 28, 1986 at Vladivostok on the Pacific coast, Chairman Mikhail Gorbachev spelt out Soviet perspectives on Asia-Pacific security. This speech interpreted Soviet 'new' thinking on international relations as it related to the region and was a distinct departure from Brezhnev's proposal for collective security in Asia enunciated in 1969. In a follow-up measure to the first proposal, Gorbachev made another important speech on Sep 16, 1988 at Krasnoyarsk in Soviet Siberia.

These proposals have an importance and an impact that cannot be ignored. Not only because they are made by a super power which is becoming increasingly conscious of its Asian identity; but also because these are followed by actions that compel a response. Simultaneous diplomatic initiatives have given these proposals a momentum from which there can be no withdrawal. Asian nations are now beginning to respond to these initiatives and adjust to the changes that they will bring forth. India too must watch the emerging developments carefully and assess their impact on its own security. Opportunities as they arise should then be exploited and adverse implications countered where required.

To understand the background of the Vladivostok initiative it may be pertinent to briefly look at developments in Asia in the early 1980's from a Soviet perspective. Sino-US relations had by then acquired a growing strategic parallelism. Close strategic consensus appeared to develop between these two countries which had security connotations obviously adverse to Soviet interests. Simultaneously a military axis seemed to be growing between Washington - Tokyo - Seoul, which could not but cause concern to Moscow. A Treaty of Peace and Friendship was signed between China and Japan in 1978 with a prominent anti-hegemony clause directed primarily against the Soviet Union. In Southeast Asia, from where the USA had reduced its commitments substantially in 1975, it now made a comeback. The Soviet forces in Afghanistan were engulfed in a war from which there seemed to be no likelihood of an early disengagement. In West Asia Moscow's role had been marginalised.

*This Article was written in January 1989 and updated till April this year. A post-script has been added including major developments during Gorbachev's visit on 15-18 May 1989.

There were serious shortcomings internally within the Soviet Union. The Party machinery had become decrepit, the bureaucracy was sloth and economic and agricultural production shortfalls reflected structural limitations. There was stagnation and simmering discontent with major deficiencies of consumer products. The first part of the Vladivostok speech highlights this aspect of life in Siberia. It was to address these issues both in the external and internal environment that Gorbachev introduced his 'new' thinking. The basic formulation of which as it relates to security issues are discussed below:

- * With the interdependent nature of the world no country can enhance its security at the expense of others.
- * A nuclear war cannot be won and must not be fought leading to a change in the military doctrine from being prepared to fight a nuclear war if imposed upon to the necessity of eliminating the nuclear threat.
- * A non-nuclear world is not only a desirable goal but politically feasible.
- * Changing the traditional Soviet pursuit of 'equal security', which only led to higher levels of armaments and competition to 'reasonable' or 'sufficient' security, where 'parity' at every level of weapon system was not required.
- * The concept of 'glasnost' (openness) can be extended to the military sphere without endangering national security. This opens up a new area of intrusive on-sight inspections that allow disarmament to be much more effective.
- * The new emphasis on the primacy of political means, as opposed to military in ensuring national security.¹

Another significant element of the 'new' thinking in the USSR is in relation to the United Nations. Gorbachev has expressed his firm faith in the UN and is determined to give it a pre-eminent role in the world in accordance with its original charter. In October 1987, Moscow declared that it would pay all its overdue UN bills, including US \$ 197 million for peacekeeping operations that it had opposed over a long time. Deputy Foreign Minister Vladimir Petrovsky said that "Any attempt to create financial difficulties in the UN and use these to extract political pressure on the organisation and bind its activities is inconsistent with realities and responsibility in politics". He also blamed the USA for reducing its commitments to the UN. The USA presently owes the Organisation \$ 414

million of which \$ 61 million is for peacekeeping operations. Some concrete measures that have been proposed by the Soviet Union in this regard are:

- * An international force in the Gulf to guarantee safe movement of ships, rather than only a US backed force.
- * Giving more powers to the UN on human rights.
- * Increasing the powers and role of the International Atomic Energy Agency (IAEA).
- * Constituting a world space organisation in line with the IAEA.
- * A UN tribunal to deal with terrorism.²
- * Moscow also offered to channel her entire humanitarian aid to Afghanistan through the UN.

THE VLADIVOSTOK INITIATIVE AND SUBSEQUENT DEVELOPMENTS

Based on the above formulation the Vladivostok speech was an attempt to chart a new course. There were five proposals in this speech which were in the nature both of a declaration of intent as well as of laying down a broad course which Soviet policy was to follow. The first proposal related to issues of regional settlement both of Kampuchea and Afghanistan. The second dealt with nuclear non-proliferation issues in Asia primarily by supporting nuclear free zones. The third proposal related to the reduction of naval forces in the Pacific and support to the resumption of the Indian Ocean Zone of Peace Conference. The fourth point was on the reduction both of armed forces and of conventional armaments in Asia. The last aspect was a proposal to have practical discussions on confidence building measures and on non-use of force in the forum of a Helsinki type conference in Hiroshima.³

The Vladivostok initiative differed from the Brezhnev proposal of 1969 on two key issues. The earlier proposal was directed primarily to protect Soviet strategic and economic interests in Asia by attempting to reduce US role in the region and to isolate and contain China. The emphasis now is on cooperation. The objective is to rehabilitate and improve positive relations with China while at the same time expanding and consolidating existing interaction with other Asian countries. In the perception of the USA, however, Gorbachev's appeal is seen to prove US dispensability to Asian security.⁴ Though a consequence may well be to

reduce US influence this is probably not the main objective. Another important point of difference was in the follow-up measures. The Brezhnev proposal received very little positive response from any nation in Asia, including India and consequently these could not be pursued.⁵

Within four months of the Vladivostok speech Gorbachev visited India. In New Delhi on Nov 27, 1986, Rajiv Gandhi and he signed the Delhi Declaration. Unfortunately this received little attention in the world media, but this actually lays down a frame work for international relations, whose impact is bound to be felt in the years ahead.

There have been other Soviet diplomatic initiatives in the region leading to substantial improvements in its strategic position. Quite clearly, China has been the focus of this attention. After the Soviet Union agreed to the Thalweg principle of mid-channel alignment for riverine borders, negotiations resumed and border talks were held for the first time since 1978 from 9-23 February 1987. Trade between China and the USSR rose from a low of US \$ 330 million in 1978 to \$ 2 billion in 1986. By 1990 this is expected to rise further to \$ 3.2 billion.⁶ Cross border trade has flourished benefiting the poorest regions of both countries. Moscow has unilaterally withdrawn one division from Mongolia. Major assistance to refurbish some 17 old factories earlier built by the Soviet Union is being discussed and many joint projects are under consideration.

Soviet relations with Japan seem to have also broken out from its earlier diplomatic freeze. Foreign ministers of both countries visited each other's capitals in 1986 and Sheverdnadze visited Tokyo again in early 1989. All these visits are an indication of this thaw. In the ASEAN, Moscow's sustained overtures at last seem to be making some headway. It is hopeful of improving relations with Indonesia and Malaysia. The Soviet foreign Minister visited Thailand and Indonesia in March 1987 and important South-east Asian leaders have been to Moscow. Trade with the region has however not yet shown any improvement. But major progress has been achieved on the Kampuchean issue. Vietnam had pulled out 50,000 troops from Kampuchea by December 22, 1988 a matter on which Moscow had been pressing hard. All Vietnamese troops are now to be withdrawn from there by end September 1989. The signing of the Geneva Accord on Afghanistan and the subsequent troop withdrawal from there has enabled the Soviet Union to disentangle itself from a most uncomfortable situation.

Barely two years after the Vladivostok speech the situation in Asia-Pacific was very different. In analysing this at Krasnoyarsk Gorbachev said that:

"In short, comrades, I would put it in this way: although not too much time has gone by since Vladivostok we can see a healthy, definitely positive and very promising process unfolding in this vast region. It bears out the increasing relationship of universal and national interests and the growing awareness of the integrity of the world in which we live. We have a realistic view of our role in this. Nonetheless, I think our contribution here has been substantial and we can see how the peoples of all countries appreciate it."⁷

THE KRASNOYARSK INITIATIVE

This was the backdrop for the speech at Krasnoyarsk on Sep 16, 1988. The focus is on normalisation of relations with China and for creating a climate of economic cooperation with Japan. However, other areas of Asian security also feature prominently. There are seven specific proposals, more to the point than at Vladivostok inviting action rather than discussion.⁸

The First point calls for a moratorium on additional deployment of nuclear weapons by all powers in the region. Soviet Union claims to be implementing this already. This is an advance over the earlier suggestion not only because it proposes the idea of a mutually agreed freeze between the USSR and the USA, but it now includes China as well. The Second point calls for the "non-increase of naval forces in the Region". The Third point relates to Northeast Asia and proposes multilateral discussions with a view to freezing and lowering the levels of naval and air forces and limiting their activity. The Fifth point calls for joint measures for ensuring secure sea and air space.

The Fourth point pertains to the elimination of military bases. It specifically calls upon the USA to dismantle the Philippine bases (Subic Bay naval and Clark Field air bases and other facilities vital to the US) and agrees in return to give up the Soviet fleet's "material and technical supply station in Cam Ranh Bay." The timing of this proposal was important because simultaneously talks were in progress between Philippines and the USA on the Bases Agreement till 1991. The Bases enhance US and ASEAN security, not necessarily that of the Philippines. The Bases occupy large tracts of prime land and contain major facilities which can be economically exploited by the Philippine Government perhaps with Japanese investment, to generate even greater advantages than what is currently the compensatory package provided by the USA. In addition the Philippines have had to pay substantial human and moral costs that cannot be equated in financial terms alone. Hence, when the Leasing Agreement comes up for renewal in 1991, there is no certainty that the Bases will be

allowed to continue. The Cam Ranh Bay 'facilities' in comparison are negligible though no doubt also important to the Soviet Navy.⁹

The Sixth proposal is about the Indian Ocean Zone of Peace conference. This was mentioned in the Vladivostok speech as well, but there is now a deadline of 1990 that has been incorporated. This proposal has been strongly resisted in the past by the USA and the Conference issue has been considered dead for all practical purposes. The chances of its taking place at this point seem rather remote.

The Seventh proposal is to create a negotiating machinery to consider issues pertaining to security in the Asia-Pacific Region. This replaces the suggestion put forward in the Vladivostok speech of a 'Helsinki type' conference which was proposed to be held at Hiroshima and which did not receive a very favourable response. The proposal is now to discuss at any level and in any composition, the creation of a negotiating mechanism to consider Soviet and any other proposal for Asia-Pacific security. The USSR, USA and China as permanent UN Security Council members could launch such a discussion.

Two crucial issues were raised at the end of the Speech. One related to improving relations with China. On this the General Secretary said:

"We are for full normalisation of relations with the People's Republic of China, for their development to a level equal to the responsibility of our two countries for peaceful world politics. We are ready for the immediate commencement of preparations for a Soviet-Chinese summit."¹⁰

The second aspect was on Japanese assistance for the development of Siberia. In his recent 'walkabouts' in the region, he has had to listen to people's complaints of the shortages and deficiencies and the general backwardness of the area. To rectify this and for the overall development of the region he has now proposed 'favoured treatment' to industrialists wishing to set up enterprises in Siberia. He has also taken note of "articles in the Chinese press about possibilities of organising Sino-Japan-Soviet trilateral economic activity on mutually advantageous conditions." The Soviet Union shares "this approach, and if all the sides are ready, the ideas could begin to be translated into practice."¹¹

IMPLICATIONS FOR ASIAN SECURITY

The implications of these initiatives have to be seen in the backdrop of Soviet military build-up in Asia in the 1960's and 1970's. Four stages of this can be identified and this may form a suitable basis for analysis.

- * Consequent to worsening of relations with China, Moscow increased its military deployment in the Far East. From a total of about 17-20 divisions in 1964, presently there are 56 divisions including 4 in Mongolia. These divisions are of course at different states of readiness. It is likely that about 18 may be at Category A (75% strength), 12 at Category B (50-75% strength) and 26 at Category C (20-50% strength). There has been corresponding increase in Strategic Forces, Air Forces and Naval components. Substantial numbers of SS-20 (intermediate range ballistic missiles) were also deployed. For the command of these forces the Far East Theatre of Military Operations (TVDO) came into being at the end of 1978.¹²
- * The four Northern Territories south of the Kurile Islands that are disputed with Japan, were reinforced and militarized.
- * Development of naval and air facilities at Cam Ranh Bay and Da Nang.
- * Military intervention in Afghanistan and the consequent massive military presence there.¹³

Distinct improvements have been made in all the above areas. Northern Territories question is linked overall with the Soviet-Japan relations. The Islands are of crucial strategic importance to the Soviet Union. The entire Indian Ocean OTVD, at this only effective round the year Soviet port in the Pacific at Vladivostok, can be blocked if these islands are in hostile hands. Through diplomatic initiative, political approaches and economic incentives, Soviet Union will attempt to diffuse the issue. However, so far little headway has been made on improving relations with Japan, because of its reluctance to normalise relations till the Islands question is resolved.

Resolution of the other two issues hinges on Sino-Soviet relations. Efforts at normalisation of relations are well on their way. There have been significant diplomatic visits; first at the level of Deputy Foreign Ministers, then Foreign Ministers and later to culminate with Gorbachev's visit in the Spring of 1989 to Beijing. That the visit is likely to take place even before the 'three obstacles' have been removed is an indication of Chinese willingness to talk. The Chinese leadership is also aware that a response to Soviet initiatives cannot be delayed. It is true that there is a limit to 'good relations' between two giant states that are destined to live cheek by jowl without the benefit of any buffer. Both are highly nationalistic and have their own big power ambitions. There are also historical antagonisms and a question of unequal borders that cannot be resolved easily.¹⁴

China's huge population and Soviet Siberia's demographic vacuum is another factor to be reckoned with. China's primary economic technology cannot also tie up with that of the Soviet Union to any significant extent except in relation to border trade. Yet normalisation of relations have distinct advantages and once begun the process will have its own momentum to take it forward.

Gorbachev's impending visit to China will indeed be significant. He had already helped create an atmosphere for this by unilaterally declaring the elimination of intermediate range missiles from Soviet Asia. Ground work for the visit is being prepared well and there is every likelihood that major decisions will be taken during this Meeting.

There is likely to be a decision on the question of the Sino-Soviet border. The parameters for its settlement appear to have been finalised with the acceptance of the 'Thalweg' Principle. Some irritants still remain, regarding the fate of mid-stream islands and the security of the major Soviet city of Khabarovsk that lie on the banks of the Ussuri River. But the issue can be resolved with mutual understanding and compromise. The same probably also applies to the Border in the West. It is not yet clear as to what principles will be adopted there regarding the alignment of the border in the mountainous areas of the Pamirs. Here too apparently initial discussions seem to have been favourable. It is perhaps not too much to expect that a solution of the Border issue may well take place at this visit. Even if it were not to be resolved, the tension at the borders which has almost disappeared may then be totally removed.

It is in this framework that Gorbachev's December 1988 declaration at the UN on unilateral military force reduction has to be analysed. In addition to substantive reductions in mechanized warfare capability in Europe he also announced that Moscow will reduce total military manpower by 500,000 in two years. of these 50,000 will be reduced from East Germany, Czechoslovakia and Hungary. On February 4, 1989 Shevardnadze announced the details of troop withdrawal in the Far East. Within the overall framework spelt out by Gorbachev in the UN, the Soviet Union would reduce its troops in the Eastern strategic theatre by 200,000 and by 60,000 in the southern strategic theatre. In addition three quarters of the troops in Mongolia will be withdrawn. The formations and units deployed near the Soviet Chinese border would be reformed to a defensive structure. He also called for a matching Chinese unilateral reduction.

The four divisions in the plains of Mongolia were two tank divisions and two motor rifle divisions. Along with their supporting air element, this was an adequate force to seriously worry the Lanzhou and Beijing Military Region Commanders. The details of these reductions in the Far-East may well be spelt out by Gorbachev in Beijing. Such a massive reduction of forces will indeed be very welcome to the Chinese and should set the scene for substantive discussions on other issues.

All these developments will challenge US pre-eminence in Asia. In many respects this position had already been eroded with US economic decline and the emergence of Japan and the four Asian Tigers as economic powers of consequence. But US military pre-eminence in the region continues, just as Japan's leading role in world economy has been clearly established. This US position is now being challenged by Gorbachev's initiatives. A result of which will quite likely be to weaken Asia's link with the US military power. This was perhaps inevitable. US economic weakness was bound to affect military power sooner than later. Congressional pressure for reducing overseas bases and military presence can no longer be avoided. Therefore, US role as guarantor of regional stability may well be affected.

Kissinger sees two sets of balance of power emerging in Asia in the mid 1990's. In Northeast Asia, between the Soviet Union, Japan and China. In Southeast Asia (including South Asia) another one between Japan, India and the Soviet Union (to some extent). In this scenario, he sees India gradually increasing its international role and in its own geopolitical interest take over some of the security functions now being performed by the USA. In doing so he sees India "condemned to rivalry with Moscow in the Indian Ocean and with China and Japan in Southeast Asia". He recommends that the USA should maintain a stand-off stance but remain as the guarantor of the equilibrium by supporting the weak against the strong.¹⁵

IMPLICATIONS FOR INDIA

There is no doubt that Soviet initiatives will have far reaching effects on India's security environment. Some will be beneficial while others may not be favourable. Consequences of some actions, though favourable in the long term, may have effects that will be adverse in the immediate future.

Soviet Union's decision to work through the UN, not only on humanitarian aspects, but also on vital security issues must be welcomed. India has always believed in strengthening the UN and to make it more responsive to the needs of our time. It has been a prominent participant in

the UN's peacekeeping efforts especially in the earlier years. If the UN's peacekeeping role is strengthened and the machinery for this well formulated, India can not only increase its cooperation in this effort, but may feel confident to entrust the Organisation with some roles in the subcontinent. Concepts like troop withdrawals upto a specific distance from the borders, supervising force reductions, ensuring observance of demilitarised zones, control of ethnic insurgencies that transcend national boundaries, and others, could then be more credible.

On nuclear disarmament again India can whole heartedly support Soviet initiatives for ridding the world of nuclear weapons by the year 2000 A.D. Prime Minister Rajiv Gandhi's proposal in June 1988 at the UN Disarmament Conference was on similar lines. With a little more realism he had extended the period upto 2010 AD. However, the attitudes of other countries towards nuclear disarmament and the progress made so far, indicate that the idea is yet to take root. Total nuclear disarmament is not accepted even as a goal by many nuclear weapon powers and any substantial reduction of nuclear arsenals will take many years to achieve. China for one is not willing to enter into negotiations for nuclear disarmament till the super powers have reduced their arsenals very substantially (upto 90 per cent according to some indications). It has also not shown any willingness to participate in serious discussions with non-nuclear weapon powers regarding substantive guarantees of not using its nuclear capability. In this environment of continued nuclearisation to coerce other nations through the IAEA or other institutions by giving them mandatory powers, will not enhance the security of such nations or that of the world.

On the other hand if the Soviet Union in its impending talks with China can convince the latter to either join the international nuclear disarmament process, or to agree to a southern Asia nuclear weapon free zone, it would be a useful contribution. Such an agreement could be in the nature of eliminating in a phased manner all nuclear weapons upto a 5,500 kms range, the triple zero option (battlefield, short and intermediate range weapons). Another may be a trilateral pact between Pakistan, China and India not to use their nuclear capabilities against each other. This may be reinforced if necessary with effective guarantees, including mutual inspections.¹⁶

The more immediate consequence of Gorbachev's initiatives on India is in relation to China. India has been accused of looking at these initiatives purely from its impact on Sino-Indian military equation. Considering India's strategic environment where China looms so large, it is only

natural that emerging developments should be analysed closely from this perspective. Gorbachev had stated in November 1986, in reply to a query, on this aspect, that, "...if we have an improvement in overall relationships among China, India and the Soviet Union.. your forecast will not come true. No one will have to take sides."¹⁷ Though an improvement in Sino-Indian relations has begun, it is far slower in pace as compared to Sino-Soviet normalisation. This mismatch may have consequences that need to be noted. We have seen the massive troop reductions that are projected by the Soviet Union by 1991. On the other hand, China's PLA has recently reduced its strength by about 25%. It is true that this troop reduction was actually restructuring and redeployment that was essential in order to enhance its combat capability. Yet it has been a very painful process for the PLA. It was a traumatic experience for many senior cadres (officers) who were used to service for life with all its attendant perks, to be asked to go home when they did not have one in the first place. Consequently there was widespread discontentment and disturbance. The PLA has barely recovered from its effects. Chinese leaders have now had to go on record to say that there will be no further reductions till the end of the Century. What then does this imply?

The current estimated deployment of PLA divisions opposite Soviet Union and Mongolia, in the Shenyang, Beijing and Lanzhou Military Regions, is 42 infantry, and 7 armoured.¹⁸ Considering that Chinese divisions are at full strength, they adequately matched Soviet capabilities. With the approximate 50% reductions of the Soviet Far East TVD, it is logical to assume that by 1991, China would be able to spare about 20 full strength divisions for redeployment elsewhere. Consequently, the PLA capability will then loom large in Asia with considerable impact on its neighbours. A result of this may be that in the 1990's border/territorial disputes with China may be more difficult to resolve than in the current decade.¹⁹

CONCLUSION

India cannot afford to underestimate the implication of Soviet initiatives in the Asia-Pacific. As an emerging regional power of some consequence, it will be affected considerably by these developments. If taken to its logical conclusion, the path set out at Vladivostok has the potential to reshape the international order in Asia. But this final goal is yet far away. In the intervening period, there would be other implications in the Asia-Pacific that may not all be beneficial to India. Yet the immediate future provides space for manoeuvre with greater challenges and op-

portunities. It is imperative that these be carefully considered and policy options evolved to maximise the advantages.

POST-SCRIPT

General Secretary Gorbachev's visit to China on 15-18 May, 1989 was overshadowed by the students protest demonstrations that shook the country threatening its very political structure. This must have intimidated major initiatives. The main significance lay in the normalisation of relations. Yet unilateral reduction of forces were announced by Gorbachev for 1989-90. These would amount to 2,00,000 soldiers in Asia. The details of these are; 12 army divisions, 11 air force regiments, and 16 combat ships from the Far East Fleet. From Mongolia would be removed the entire air force element and three divisions, leaving behind only one tank division. He also offered to demilitarise the entire Sino-soviet border and convert this into a frontier of peace and good neighbourliness. The border talks would be upgraded to Foreign Ministers level.

Notes and References

1. C Raja Mohan "International Peace and Security - The Changing Scenario", *Strategic Analysis*, Jan 1988, Vol xi. No. 10, p. 1122.
2. O N Mehrotra, "Gorbachev's Proposals for a Secure World", *Strategic Analysis*, Jan 1988, Vol xi. No. 10, pp. 1144-45.
3. *Strategic Digest*. IDSA, New Delhi, Sep 1987, pp. 1727-1743, from the Soviet Land. Documents, 1986.
4. Henry A Kissinger, "A Memo to the Next President", *Newsweek*. Sep 19, 1988, p. 25
5. For a competent analysis from an Indian perspective see "India and Gorbachev's Asia-Pacific Security Proposal" by Prof S D Muni published in the Swedish Institute of International Affairs, as its Occasional Paper No. 1, in 1988.
6. Sujit Dutta, "Sino-Soviet Policies : Trends and Issues", *Strategic Analysis*. Aug 1987, Vol xi, No. 5, pp. 622-23.
7. Speech by Mikhail Gorbachev at Krasnoyarsk, September 16, 1988, *For Building New Relations in the Asia-Pacific Region*, Allied Publishers Private Limited, New Delhi, p. 8
8. *Ibid*, pp. 13-14.
9. For an analysis of the ASEAN view point (less Philippines) on the US Bases issue, see Muthiah Alagappa in "US Military in Asia Should Leave Gradually", *Far Eastern Economic Review*, pp. 32-3.
10. Note 8, p.10.
11. *Ibid*, pp. 16-18.
12. *Military Balance*. IISS, London, Autumn 1988, pp. 30-44.

13. Henry Gelman. "The Soviet Union' East Asia and the West: the Kremlin's Calculus of Opportunities and Risks", Adelphi Papers No. 217, Spring 1987, pp. 4-5
14. Robert H Scalapino, "Soviet Influence in East Asia and the Pacific in the Coming Decade: Part 1", Adelphi Papers No. 217, Spring 1987, pp. 36-7.
15. Kissinger, n.4, p.26.
16. K Subrahmanyam, "Importance of Gorbachev - Product of Worldwide Ferment", Times of India, 12 Oct 1988.
17. Muni, n.5, p.21
18. Military Balance, IISS, London, Autumn 1988, pp. 148-9.
19. Jasjit Singh. Modernisation of the Chinese Military: Imperatives and Implications. New Delhi. IDSA, Apr 1986 (Mimeograph).

JOIN

**UNITED SERVICE INSTITUTION
OF INDIA**
Founded 1870

For the furtherance of
INTEREST AND KNOWLEDGE IN THE ART
SCIENCE AND LITERATURE OF THE
DEFENCE SERVICES

For particulars, write to
Director U.S.I.
Kashmir House
Rajaji Marg
New Delhi - 110011

Indian Naval Development - Need for Review

VICE ADMIRAL SUBIMAL MOOKERJEE, PVSM, AVSM (RETD)

A striking feature of the recent Presidential Review of the combined fleets in Bombay harbour was the romance of the Navy, VIP guests and the media with VIRAAT and VIKRANT. During a press conference on the eve of the Review, the Chief of the Naval Staff forecast the presence of the first indigenously constructed aircraft-carrier in a Review in 1998. He was, however, silent over the future size or shape of our submarine and shore-based naval air arms.

There have been articles in the press and naval magazines advocating a multi-carrier Indian Navy. The present Chief seems to be following his predecessor's policy of designing the navy around Carrier Task Groups. The object of this article is to examine against the backdrop of technological and other changes, costs and naval history, the wisdom of the path of naval development.

For the sake of clarity and perspective, it is desirable to look back into history. Designing a major navy in the nineteenth century was a simple task. The unambiguous aim of naval strategy was to acquire colonies, bases, trading rights and preserve them to ensure almost limitless flow of resources. Navies were largely homogenous in that they consisted primarily of surface combatants. Hence Mahan's doctrine of absolute command of the seas through decisive surface fleet actions to render enemy surface fleet units as fugitives at sea, fascinated the Chancellories and Admiralties of aspiring naval powers. Navies got designed around battleships and later aircraft carriers. Naval power was measured by counting ships and tonnage. Brilliant performance by low-technology submarines without any support from friendly aircraft and ships, in World Wars I and II and mauling of British aircraft carriers in the relatively restricted waters of Europe and the Mediterranean were indicators of a wind of change in the long-hugged concept of maritime strategy-like no longer fought like. The need for a balanced navy emerged.

As a result of technological revolution, since World War II, in propulsion of ships, submarines and aircraft, electronics, explosives and precision-guided munitions, rules of naval game have undergone a sea-change. The maximum beneficiaries of this technological revolution are submarines and aircraft.

Submarines now run deeper, are more silent and faster with considerably enhanced endurance - almost limitless in case of nuclear propelled variants. They have become extremely difficult to detect - in Indian Ocean region in particular. Like high performance aircraft, they can take swift evasive action in both horizontal and vertical planes. Finally, ability to fire long-range precision guided high speed torpedoes against high-value ships or launch cruise and ballistic missiles against ships and targets deep inland, make them invaluable for accomplishing a wide range of tactical and strategic tasks in the teeth of stiff opposition.

Similarly, aircraft fly faster and further with remarkable manoeuvrability for both offense and defence. They can carry a wide range of pay-loads including stand-off, anti-aircraft, anti-ship missiles and anti-submarine depth bombs and torpedoes. Shore-based maritime aircraft are increasingly becoming multi-purpose or capable of quick change of roles.

Developments in naval propulsion technology, data-processing and transfer, technique of computation, communications, Electronic Safety Measures and missiles have undoubtedly enhanced the capabilities of surface combatants. Rotary wing helicopters capable of operating from relatively small platforms like destroyers and frigates, provide valuable support to forces at sea.

Above virtues notwithstanding, surface combatants are constrained - at present level of technology - to operate in a medium contiguous to two other mediums, ie hydrosphere and atmosphere where submarines and aircraft enjoy a decisive edge. Alliance between submarines and aircraft compound the problem of survival of surface ships. Further, due to their distinctive and easily identifiable electro-magnetic, infra-red and acoustic signatures, surface ships can no longer hide in the wide oceans but have become highly detectable by submarines, aircraft and military spy satellites. This increases their vulnerability to detection and attacks by modern submarines and aircraft.

Unemotional and objective study of naval history since World War II, highlights this vulnerability. Whilst Carrier Task Groups carried out their tasks and missions with aplomb in Korea, Suez, Vietnam, Grenada and during Indian naval operations against erstwhile East Pakistan, it needs to be recognised that in all cases, the Carrier Task Groups operated from a virtually sanctuary situation against marginal, if any, opposition from naval or air forces of the target countries.

The Falklands War, 1982 - the only exclusively naval war since World War II - was a different ball game. The war marks a watershed in the

development of navies by demonstrating the vulnerability of Carrier Task Groups and ascendancy of modern submarines and shore-based maritime aircraft operating under most trying conditions.

A handful of British submarines - nuclear propelled and diesel-electric - established a maritime exclusive zone 8000 miles away from bases and prevented reinforcement of Argentine Contingent in the Falklands except by C-130s. Sinking of BELGRANO, the Argentine Cruiser by a British nuclear submarine using old torpedoes, resulted in Argentine surface forces including their aircraft carrier sitting out the entire war in the safety of their harbour. Lone Argentine-submarine was able to carry out two attacks - unsuccessful because of suspected sabotage by the British - against the British Carrier Task Groups which virtually ran out of its stock of anti-submarine ammunition in frequent attacks against non-submarine contacts. Neither side lost any submarine which, however, profoundly affected the operations and deployment of surface forces.

In spite of a major strategic blunder by the Argentine Military Junta in not lengthening the Port Stanley airfield for operation by disembarked Argentine naval aircraft, during the long Voyage of the Task Group, Argentine pilots managed to severely maul the British Carrier Group operating at the extreme range of aircraft from the mainland. The British lost two destroyers, 4 frigates, 1 Landing Ship Tank and the giant logistics support ship, the Atlantic Conveyor which had the misfortune of seducing an Exocet missile heading for a British carrier. In addition, 2 destroyers, 14 frigates and 2 Landing Ships were damaged. British losses would have been more fearsome if the bombs delivered by Argentine aircraft were properly armed and Argentine naval aircraft were operating from Port Stanley. Argentine also lost a number of their aircraft to British Sea Harriers, ship launched missiles and gunfire. Perhaps, Argentine aircraft losses could have been considerably less if they had a little more fuel left for evasive manoeuvres and had USA not armed British Sea Harriers with their latest Sidewinder air-to-air missiles.

A major lesson, thus, of naval history since World War II is that whilst Carrier Task Groups are extremely effective against weak coastal powers, their military effectiveness against modern submarines or shore-based high performance aircraft, has sharply declined. While ascendancy of modern submarines is well established, it would be unwise to conclude that they do not face credible threat from enemy submarines singly or in alliance with shore-based long-range anti-submarine warfare maritime patrol aircraft. To effectively counter this possible threat, our submarines - nuclear and diesel-

electric - must also operate in close alliance with friendly shore-based aircraft and surface combatants with latest anti-submarine warfare and C³I capabilities.

Whilst the ultimate test of a navy is its military effectiveness against an enemy, it is also a fact that for the major portion of its existence, a navy is not engaged in combat. Instead, it acts as an instrument of the nation's foreign policy and is called upon to perform a wide range of tasks to serve political ends. Although the efficacy of naval power as the currency for international influence has somewhat declined, it is undeniable that naval power as a force in being, gives the nation considerable flexibility in conduct of foreign relations. Naval power helps the nation to establish its right to be consulted. Peacetime tasks of the navy include rushing aid and comfort to a nation in distress due to national calamities. Rapid sending of such aid becomes a diplomatic asset.

Due to their visibility, endurance, flexibility in deployment, surface combatants are eminently suitable for friendly, flag-showing visits. More awe-inspiring the presence, more vivid is the impression of power in the eyes of the beholder. There is no doubt about the usefulness of battleships, aircraft carriers or cruisers for such ceremonial visits although their military effectiveness has waned. In the context of friendly visits, nuclear submarines are handicapped. They look too menacing and in addition are likely to evoke protests against the supposed incidental dangers to health and safety.

But, flag-showing in an area of tension is quite different from merely ceremonial visits to friendly ports. Such flagshowing may be done by some littoral or extra-regional navies to forestall political or military events in a target state in the Indian Ocean region. To discourage such adventurism aimed at destabilisation, it may be necessary to deploy peace-keeping naval forces which would be credible enough to convey the message of hopelessness of such adventurism by either a littoral state or an extra-regional naval power. Centre-piece of such peace-keeping naval forces would be nuclear submarines.

In modelling a navy for war, peace and peace-time tension, the phenomenon of exponential increase in cost of military equipment including naval, assume extra-ordinary importance for all countries, particularly ours in view of limitation in resources and competitive demands for development. Further, since construction or acquisition cost is only a fraction of the total cost of manning, operating, maintaining, supporting and modernising, a life-cycle cost approach is essential.

Assuming that the aircraft carrier to be built indigenously is medium-sized, ie around 30,000 tons with required speed, endurance and contemporary sensors, point-defence capability, one such aircraft-carrier is unlikely to cost less than Rs 1500 crores at current prices. This carrier will need escort protection in foreseeable future. Although, escorts, no doubt, will have their own offensive capabilities, but as long as they are to operate with the carrier, their primary task will be to protect the carrier. Five escorts with requisite capabilities may be expected to cost Rs 2,000 crores at least. Analysis of our naval budget over the past, brings out the fact that currently we spend 50 to 60% of total capital cost of our force level (excluding aircraft) on manning, infrastructure, maintenance support, modernisation etc. Assuming that we improve upon our track-record and reduce our maintenance budget to 40% of acquisition cost, the 30-year life cycle cost - embarked aircraft excluded - of one Carrier Task Group would be around Rs 45,000 crores. Considering its declining military effectiveness, the concept of building our navy around Carrier Task Groups is not economically sound. It is upto the Apex body to decide whether there exist stronger political considerations.

A question is often raised as to how does a carrier-less navy meet the requirements of strike against enemy surface units and air defence. If enemy surface units are encountered within range of shore-based maritime aircraft as in the Falklands War, the task gets effectively solved. Outside the range of shore-based maritime aircraft, modern missile destroyers and frigates with missile carrying helicopters and armed with targeting data from satellite or shore-based long range maritime patrol aircraft, will do the needful. So far as air defence against multi-wave and multi-directional air attacks are concerned, the lesson of Falklands War is that in future conflicts, surface ships should use prudence in selecting their zone of operation. If access to target data from their big brothers via the satellite, are available, dependence on long range maritime patrol aircraft is not critical. Except against saturation air attacks, the anti-aircraft/missile defense - missiles, guns close in weapon systems and passive/active electronic counter-measures of modern destroyers and frigates are quite formidable.

Architecture of our naval forces is critically dependent on our maritime strategy and threats thereto. Maritime strategy stems from Grand National Strategy. Our unambiguous national strategy is to safeguard our Independence, unity and territorial integrity, make Indian Ocean a zone of peace presently threatened by the presence of big power navies with their bases, operating facilities and strategic allies in the Indian Ocean region, and pursue the foreign policy of Panchsheel and non-alignment. Need is, therefore, for a maritime strategy based on the doctrine of non-aggressive but credible de-

fence of our core national interests which include stability and peace in the Indian Ocean region by a balanced navy.

Our maritime defence zone would be two tier and extend to around 1,000 nautical miles from our mainland and/or island territories. Threats in the inner zone of 300 nautical miles can be expected to be from clandestine forces, mines, submarines, shore-based aircraft and Cruise missiles launched from seaward. To ensure effective defence of this contiguous inner zone, the primary need is for shore-based ASM/ASW/ESM/AEW medium range maritime patrol aircraft, shore-based cruise missiles, coastal submarines and ASW/SSM capable patrol craft - the C³I facilities being provided by maritime operations rooms. In addition, we need specialist ships like minesweepers and vessels for inter-island transportation of men and material.

Main threats in the outer zone would be from submarines - nuclear and diesel-electric, shore-based strike aircraft, multi-purpose medium/long range maritime patrol aircraft and first-rate anti-submarine warfare surface combatants. What Naval forces need are primarily submarines - conventional and nuclear propelled - in close alliance with shore-based multi-purpose long range maritime patrol aircraft and first rate ASW/AMD ships with C³I capabilities in support of our submarines. Specialist ships for logistic support would be other obvious requirement.

Summing up, technological revolution since World War II has decisively tilted the crucial offense-defence balance in favour of modern submarines which have become the capital ships replacing aircraft carriers. Armed with tropedoes, cruise and or ballistic missiles, they can perform a wide range of tactical and strategic tasks. High performance shore-based maritime aircraft are capable of multiple missions at considerable distance from airfields. In contrast, military effectiveness of aircraft carriers in war and peace time crisis situations had declined sharply. But surface ships with varying combat and specialist profiles perform a wide range of tasks in peace and in war in support of submarines.

In conformity with our unambiguous national objectives and policy, recommended maritime strategy is one of non-aggressive defence through a sensible sufficiency of maritime forces constituting a balanced navy. The message that needs to be conveyed to both littoral and extra-regional powers by this balanced navy is that whilst we have no intention to project power or indulge in gunboat diplomacy, we have the will and capability to safeguard our core national interests which include peace and stability in the region.

In architecturing a balanced navy, cost has become a very important factor. No navy in the world can afford to have the entire range of naval forces. Even excluding the embarked air wing, a Carrier Task Group has become prohibitively costly at a time when its military effectiveness is in the wane. Hence the concept of a balanced navy is to be tempered by cost considerations and hence prioritisation.

Unless political considerations override military and economic considerations, our navy for twenty-first century should be built around modern submarines - conventional and nuclear propelled - in close alliance with shore-based maritime aircraft and a wide range of surface ships with varying combat and specialist profiles.

Is the IAF A Tactical Air Force?

WG CDR P KHOKHAR, VM

INTRODUCTION

Born of the fragmentation of the erstwhile Royal Indian Air Force at the time of partition, the IAF was weaned on conflict and in just over four decades of independence has served the nation in four bloody conflicts and numerous low-intensity high risk situations. From its very inception, the IAF has often been referred to and subjected to applications as 'an extension of the artillery'. Such an uninitiated approach not only curbs the potential use of the force but also subjects it to unproductive and frivolous applications. Because of our inheritance in terms of aircraft and weaponry and the erst-while national approach to regional issues, the major utilisation of the IAF has largely been tactical. The strategic tasks undertaken have been ignored or played down, sadly enough due to incomprehension of the dividing line.

The extent of our military involvement in the region in the recent past has been unprecedented in our history. The current defensive posture is vital to regional stability and as changes occur, we would have to address these changes or permit events to rule us. Some of the critical areas of tension are in our neighbourhood. In economic, cultural and political terms we are becoming increasingly involved with SAARC. It therefore becomes imperative that we match these ties with the military capability to protect our interests and honour our obligations to friends in the region. The IAF here becomes a decisive element. But an unambiguous comprehension of tactical and strategic application is first necessary. Persistent myths and incomprehension of the terms 'tactical' and 'strategic' have clouded the distinction between the two. These terms must be dispassionately viewed to get a clear definition of tactical and strategic operations and thereby fit the IAF into an appropriate category.

STRATEGIC AND TACTICAL APPLICATIONS

A tactical Air Force, by classical definition, limits its use 'in support of surface forces'. Since surface forces can physically show a piece of land/sea under their control, the abstract nature of air, precludes an immediate understanding of its vastness and the effect that air power would exercise.

A number of recent developments in the region have increased the importance of the capabilities of the IAF. These developments include a growing incidence and intensity of regional conflicts and an impetus towards power projection by India, as a regional influence, if not a regional power.

The deep-penetration, long range aircraft of the IAF, which include fighters and transports, provide an existing asset which can significantly add to the nation's capability to conduct regional operations. Although a persistent view associates these aircraft strictly with tactical missions, the reality is that they can be tasked with strategic responsibilities. Their present-day capabilities to carry out these responsibilities, are substantial, and this potential is expanding even more dramatically with technological advances.

Several factors which dictate the requirement for a Strategic Air Force are as follows:-

- (a) The requirement for prompt power projection in the region, in response to crises, eg Gajraj airlift to Sri Lanka and Maldivé Islands.
- (b) The need for long-range strike capability, eg. Shamsher and Vajra aircraft.
- (c) The urgent inter-theatre requirement of assistance by forces possessing long-range, quickly-reactive and massive fire-power.
- (d) The tightening constraints on defence budgets which place a premium on versatile weapon systems and on the need to derive maximum capability from existing forces.

All these factors accentuate the need for a more comprehensive consideration than in the past, of the role of the IAF in regional operations. Any such examination however, must come to grips with some prevalent myths regarding strategic operations.

WHAT ARE STRATEGIC OPERATIONS

Among the pervasive myths associated with strategic operations a few stand out. These myths are interrelated and mutually reinforcing. Their combined effect has been to block an understanding of the multifaceted nature and versatility of modern airpower, such as that possessed by the IAF.

The first myth is that strategic operations relate only to superpowers and are inter-continental in nature. Strategic aspirations of each nation dictate the nature of strategic targets in wartime. The bombing of the Sui gas plant and Karachi harbour in 1971, stand out amongst others as two eloquent examples of the strategic role of the IAF. The airlift to Sri Lanka and Maldivé Islands in more recent times, are further examples.

A second and related misconception is that 'strategic' equals 'nuclear'. Underlying this fallacy is the assumption that 'long range' (strategic) missions

means exclusively 'nuclear' missions. The suitability of a particular munition delivered is a function of the given mission and its objectives. In fact, the broadening dimensions of modern warfare underscore the importance of conventional munitions delivered by long-range, heavy-payload weapon systems. We possess such systems for the strategic targets that we have designated. Our aircraft have the ability to project massive conventional fire-power, not only within a theatre, but well across it, deep into enemy territory.

Another grey area is that theatre warfare is strictly the province of tactical fighter aircraft. In fact, the terms 'strategic' and 'tactical' describe actions, not weapons, and it is incorrect to associate these actions with specific types of aircraft.

Commanders employ military weapon systems based fundamentally on the assessed capability of the system to accomplish a specific military requirement. The inherent flexibility of airpower allows different types of aircraft to be employed in a variety of roles. The type of system employed is of far less consequence than the results anticipated from its intended use. In fact the system should be best used to accomplish the action at hand, regardless of how the aircraft is 'labelled'.

STRATEGIC POTENTIAL OF THE IAF

While technology is enhancing the multi-mission capability of aircraft, operational requirements are rendering it essential. The role of the heavy lift transport aircraft is uncontroversial. However, the strategic strike potential of the IAF can be further enhanced by the following capabilities:-

- (a) In-flight refuelling.
- (b) Avionics.
- (c) Munitions.
- (d) Training.

In-Flight Refuelling: The range of strike aircraft can be further enhanced by inflight refuelling. The benefit accrued extends to the pay-load as well. This will require minor modifications to the existing fleet, but calls for a fleet of tankers and necessary training to use them by day or night. While this concept is undisputed, more attention to its speedy implementation is necessary.

Avionics: The Jaguar (DARIN)* and Mirage-2000, already possess avionics that incorporate the state-of-the-art technology. However, several up-date packages are available, which if incorporated into the existing fleet of other

*Smiths Industries navigation and attack system

fighter aircraft, would lend an additional credence to their ability. Such moves, which are apparent, and are being mooted at various levels, would also increase the versatility of the fleet for years to come.

Munitions: Present munitions support land and sea attacks by gravity delivery, mine-laying at sea and stand-off attacks. A wide range of installations can be attacked by using General Purpose (GP) bombs or Cluster Bomb Units (CBUs). Use of Precision Guided Munitions (PGMs) will optimise on the lethality of weapon systems possessed by us. While current munitions and delivery platforms provide a significant capability, several improvements will soon be available. Advances in sensors, computers, propulsion, guidance and 'smart' munitions could provide our aircraft with even more effective weaponry in the near future. The key to effective employment is to develop systems that will allow us to exploit the inherent advantages of long-range aircraft without exposing them to undue risks. Stand-off weapons provide a viable answer.

Training: This area is possibly the most difficult to implement since it calls for an attitudinal shift of perceptions. The first step requires a clear-cut understanding of the distinction between strategic and tactical operations and the role of the IAF. Thereafter starts the arduous, though routine task of training air crew. However, unless policy makers and staff officers comprehend the term 'strategic', training directives would either be half-baked or orientated in the wrong direction.

CONCLUSION

The principal objective of strategic forces - to deter the enemy, remains unchanged. Yet, in an era of essential equivalence, credible conventional deterrence is dependant upon convincing potential adversaries that we can respond effectively across the entire spectrum of conflict. In this context, the potential versatility of the IAF today, is tremendous.

Targeting the enemy's homeland remains an important mission of strategic air power. Yet technological advances in warfare, weapons accuracy, munitions variety and capability, in the speed, range and carrying capacity of delivery platforms, in ECM and a host of other measures - increases the combat effectiveness of the IAF, clarifying the traditional distinction between 'strategic' and 'tactical' missions.

Therefore with the latent potential that has always existed, we now need an integrated approach to determine our strategic future. It must account for our legitimate defence requirements and also be tempered with our psyche, mental-

ity and historical choices. The over-riding guideline for the future is that the IAF must provide us the maximum utility and capability in the regional arena. This requires versatility in terms of military missions. It implies that forces dedicated to static defence can be readily and speedily switched to roles of offence and mobility. The IAF possesses this capability which needs to be exploited whenever required. The IAF, I submit, has long come of age.

ADVERTISE
in the
JOURNAL
of the
United Service Institution
of
India

Advertisement Rates

Half Page	Rs. 1500	(\$ 110) per issue
Full Page	Rs. 2500	(\$ 180) per issue
Inner Cover Page	Rs. 3000	(\$ 215) per issue
Outer Back Cover Page	Rs. 3500	(\$ 250) per issue

Political Power in the Nuclear Age

DR JAI NARAIN*

From the time immemorial the most significant element in the content of power had been organised violence. Although there had also been subsidiary expressions of power, yet their importance had changed with the passage of time. They are thought to be the 'planet' of power revolving around physical violence, considered as the 'sun' of power. It is generally held that ancillary aspects of power have changed as a result of changes which have taken place in the structure of human society. But no planet has yet been able to eclipse the sun (physical violence) which still matters most in the international power politics.

Some recent developments in war are strange. The experiences of the two world wars in which the nature of the physical violence used was, what we now call conventional, showed that violence has become somewhat too much of a good thing because the destruction caused by modern weapons in these two wars was so great that the victors were unable to profit economically from victory and at best could only hope to attain their political objectives. Furthermore the chaos created by these wars was such that new problems cropped up which had to be solved often by methods contrary to the purposes for which the wars had been started.

During the 1914-18 war, it was assumed and written on the parchment at Versailles in 1919 that vanquished would pay the costs and preferably a bit more. It was discovered after years of endeavour that this was a fallacy. The defeated Germans could not be made to pay for the war, even though they were lent vast sums of money to help them be good payers. This attempt to achieve what Sir Norman Angell in his 'The Great Illusion' (1911),¹ had declared would be impossible in the next great war was a contributory cause to the great World Slump of 1930s, whose consequences in Germany did much to create conditions favourable to the rise to power of Adolf Hitler. It was again established by the beginning of 1945, that military victory could only be obtained, at any rate in a considerable conflict, if a degree of violence was used which made it impossible for the defeated nation to pay reparations. All this can be summed up by saying that in the decades before the arrival of the nuclear weapons, the level of violence in war between great powers had reached so high and destructive a degree, that it was now only possible to use it to obtain a political objective and not both a political and economic pur-

* Dr. Jai Narain is Lecturer in Department of Gandhian Studies, Punjab University, Chandigarh.

pose. Then in August 1945 came the atom bomb and soon after the H. bomb.

More than a generation has passed since United States dropped atomic bombs over Hiroshima and Nagasaki and President Truman is said to have declared: This is the greatest thing in history². Nuclear weapons have not so far been used again. But there is little question that their mere existence, unused and largely unseen as they have been since 1945, has profoundly influenced the course of power politics. More than a century and a half ago Clausewitz pointed out that war was nothing but a continuation of political intercourse.³ In just the same way, the mere possession of nuclear weapons is dimension of political intercourse- an instrument which may enable countries to achieve, without actually going to war, political objectives they could not have achieved from a state of military weakness. The possession of nuclear weapons, in particular, is likely to strengthen a country's political muscle possibly in an 'offensive' sense and certainly in a defensive sense.

In an offensive sense, a nuclear country may, depending on circumstances gain an enhanced ability to influence, intimidate or dominate other countries without resort to military force to make them behave in ways they would not have chosen for themselves. Even if these other countries rather doubt that the strong country would actually use its nuclear might against them, there are some risks which are simply not worth taking.

The Soviet Union's relationship with Eastern Europe provides striking example of how nuclear strength can be exploited for offensive political purposes. The Soviets have relied heavily on their vast nuclear power for preserving political control over their satellite empire in Eastern Europe. Were it not for the Soviets' nuclear superiority, it is doubtful whether any of the East European countries would still be run by communist governments under a single party system with a foreign policy of sub-servience to the Soviet Union. The Soviet nuclear arsenal ultimately rules out as hopeless any thought that the people of Eastern Europe might entertain of throwing off the Soviet yoke by fighting the Soviet armed forces.

The picture is rather more gloomy on American front which is using its nuclear superiority rather more skillfully to serve its interest. The purpose of the present essay is not to condemn Soviet Union or America for their nuclear arsenals, but to show how nuclear power has become a determining factor in power politics today.

In a defensive sense, the role of nuclear arsenals in strengthening a country's political muscle is likely to be much more decisive, even in a world which contains several nuclear countries. There is a possibility that a nuclear country may not be able to influence, intimidate or dominate others. But it

should at least be able to resist attempts by others to influence, intimidate or dominate it. Since nuclear weapons were invented, no alternative guarantee of national independence has looked really adequate. Although this applies to the superpowers yet this is applicable to other countries also. Small, nuclear forces, however, should be able to confer substantial protection against political intimidation provided they are capable of inflicting damage on a scale which others would find unacceptable. There-in lies the part of the reason why a number of Third World countries are aspiring to acquire nuclear capabilities.

From a Western standpoint, the nuclear umbrella which United States holds over Western Europe through NATO provides a striking example of how a nuclear capability can protect countries against political intimidation or domination. This nuclear umbrella has contributed, and continues to contribute, decisively to the independence of Western Europe from communist influence but at the same time forces them to dance to the tune of United States. The Soviets for their part can be assumed to see their massive nuclear arsenals, similarly, as protecting them against political pressures from the West, and especially the United States and at the same time forcing its allies to dance to their tune.

A country's political muscle will be greatest if it has a monopoly of nuclear weapons, or massive superiority; weakest, if its nuclear arsenal is massively inferior to those of other nuclear countries; and of intermediate strength if its nuclear arsenal is broadly comparable with that of another country. Taking these cases in turn, if a country has monopoly of nuclear weapons, or overwhelming superiority its power must potentially be strong. The range of its foreign policy options, though still subject to significant constraints, must be vastly increased. The only country which has enjoyed a nuclear monopoly, or massive superiority, is the United States in the early post war years, which exploited the massive political power which this nuclear privilege gave it, to best serve its interests. The stoppage of nuclear fuel to Tarapore Atomic Reactor by America is one among the countless examples of use of nuclear privilege in power politics.

Thus it is clear from the above discussion that the place of physical violence has been taken by nuclear violence as the determining ingredient of power in power politics. The origin of this new force (nuclear violence) in the orbit of power politics struggle has eclipsed the sun (physical violence) to become a planet and has acquired its own place.

Whether it is conventional violence or nuclear violence, but violence is there; can't we get rid of this from of Political Power? Is the element of violence essential to the definition of political power? If an attempt is made

to know the opinion of the experts on the subject we find that Bierstedt⁴ the famous authority on this, chooses to stress heavily the coercive aspect of political power. 'To coerce' is a verb: 'A coerces B'. If this is power and it is no longer latent, then in Bierstedt's terms, it is no longer political power. If power is meant as potentially coercive, then atleast the problem of contradiction disappears. But does power have to be potentially coercive to the exclusion of all other potentialities? To put it in another way, is it potentially operative only against the wills of others?

It is true that pooled energy can be and is used to coerce others but it can also be used to serve collective purposes. Power simply is. It is not inherently directed; it is directed by people and in a multiplicity of ways, not all of them are coercive. This view is also supported by Harold Lasswell who finds himself in complete agreement with Charles Marriam in repudiating the idea that the exercise of power rested always, or even generally, on violence, or that the essence of the power equation is force, in the sense of violence and physical brutality.⁵ Power may rest on faiths and loyalties, habits and apathy as well as interests. Even the constraints may not always take the form of violence. Power only entails an effective control over the policy; the means by which the control is made effective may be many and varied. Thus in theory violence is not an essential ingredient of power in power politics.

The question which mankind must answer is this. Has violence become so enormous that it should no longer be considered the central and most important feature in the content of power? In order to answer this question satisfactorily, we must assess why and how nuclear violence differs in quantity and quality from the conventional violence which was becoming inconveniently excessive in the last years of the pre-nuclear age.

Stephen King-Hall has answered this question in his "Power Politics in the Nuclear Age" by examining the evolution of travel. To quote him, 'A man on foot, a horse rider; a bicyclist; a motor driver; a passenger in a fast ship; the same man in an early plane; his son in a jet plane, all are travellers within a recognisable framework of progress. But when we consider the movements of man in space, conditions become so different from anything hitherto known in the business of movement from A to B that we are dealing with a development which is only tenuously connected with what we have usually meant by the word travel. Space travel for all practical purposes is a completely new form of movement from A to B and raises problem of an absolutely novel character such as weightlessness, dangers from cosmic radiation and so forth'.⁶ King Hall further adds that "there is the same enormous gap between conventional and nuclear violence".⁷ The peculiar qualities of the nuclear weapons show how profoundly they differ from what are now

called conventional weapons and their methods of use both strategically and tactically, have caused many ideas hallowed by centuries of tradition and practical experience to become obsolete. The two superpowers are fully capable of destroying each other along with the whole of the world several times. What was, is no more; what was not even imagined, is.

The degree of nuclear violence is so enormous and indeed virtually unimaginable, that the saints and the sinners are now on the same platform. Morality and expediency have become Siamese twins. "It is wicked to use violence", say the Saints. 'It is mutual suicide to use it' say the sinners. Now every body has realised that since nuclear violence is logically unusable and terribly expensive, it should be abandoned. Previously violence seemed to be useful for power politics but now it has been turned upside down too quickly. It has all happened within the life span of one generation. The experiences of World Wars I and II forced every one to admit that conventional violence had become so great, that it could no longer be sensibly used to achieve political and economic objectives.

If there had been a third world war with conventional weapons and perhaps a 25% increase of violence over World War II, then it might well have turned out that the educational process would have been completed. People might have said; "It is now clear that this idea of settling disputes by violence is obviously absurd. No one has won World War III".

But instead of taking one more step towards the goal of realizing that violence had outlived its usefulness and theoretically also it is not necessary for political power, violence has made a leap into the Nuclear Age. We know that our leaders keep on telling us, that nuclear war is mutual suicide but we still can not swallow the fact that this is the end of the long connection between power politics and violence. The situation is further confused by the fact that no country who has nuclear capacity is limiting it but rather increasing it many fold. The recent talks between President Reagan and Soviet leader Mikhail Gorbachev have taken the first steps towards an accord on limiting nuclear arms stocks. NPT is being used to deprive the non-nuclear countries to have nuclear capacity but those who already possess great nuclear capacity have been left untouched by it. It is only to prevent those who are striving to attain nuclear power.

Clearly a very urgent and practical requirement is the prevention of the spread of nuclear weapons and, therefore, of violence capacity in its deadly form. The hour is late and this objective will not be achieved unless the Americans and Russians can come to terms with this problem. It is also clear that the collaboration of England, France, Canada and China would also be indispensable. It is only by this that we can progress towards the ideal of the

elimination of violence in international power politics otherwise it will wipe out the whole of humanity from the surface of the earth this time.

It would be strange and unnatural if these far reaching effects of nuclear violence had not altered radically the relative importance of the various components of power. It is generally admitted now that nuclear energy by its degree and type of violence has ensured that violence as the prime element of power has come to the end of its day. If man refuses to recognise this, then, he will destroy himself through incapacity or unwillingness to adapt himself and his institutions to this great change.

But it is hard on man that an idea which has been so basic in his theory and practice of power politics for so many thousands of years should disappear in a flash. No wonder he is lost, puzzled and confused as he apprehensively tries to convince himself that what some begin to realise is a myth, is still the reality in which he believed for so long. But if he is to survive he must make a supreme effort to eliminate nuclear violence from power politics.

Notes:

1 Angell Norman, *The Great Illusion* 1971.

2 Liddell Hart. B.H., *History of the Second World War*, (Pan Books, 1973), p. 727.

3 Clausewitz, Carl Von. *On War*. (London; Kegan Paul, Trench, Trubner & Co. Ltd., 1911), Vol. III, p. 121.

4 Bierstedt Robert: An Analysis of Social Power in "American Sociological Review", December, 1950, p. 733.

See also

Bierstedt Robert: *Power & Progress: Essays on Sociologic Theory*, New York, Mc Graw Hill, 1974.

5 Marriam, Charles E., "Political Power" in Lasswell, Harold D., Marriam Charles E., and Smith, T.V., *A Study of Power*, (Glencoe; Illinois, The Free Press 1950), p. 20

6 King-Hall, Stephen: *Power Politics in the Nuclear Age* (London; Victor Gollancz Ltd., 1962), pp. 50-51.

7. Ibid.

Nuclear Weapons and National Security

LT COLONEL A A ATHALE*

INTRODUCTION AND DEFINITIONS

Peace and security are two terms that are often clubbed together. Yet there appears to be an enduring dichotomy between the two. Peace, more often than not is defined as absence of active violence. Kautilya defines it as a period during which the vanquished is preparing for and the victor exploiting for an imminent next round.¹ Hans J Morgenthau echoes this sentiment.² Security on the other hand is a much more comprehensive term and can be defined as a situation in which there is absence of a perception of a threat to survival. Thus defined peace could exist even in the circumstances wherein security is totally lacking. During the early parts of the 20th century, the continent of Asia had relative peace under the European colonial domination, but security for the multitudes of ancient civilizations was absent.

As seen earlier there is a clear dichotomy between peace and security but on the other hand there is a close linkage between security and independence. Independence of decision making, both internal as well as external being only possible under the condition of security. Independence of decision making is a necessary precondition for development -- our national goal. This linkage can be easily understood when we contrast the striking progress of the last 39 years with the stagnation of earlier 150 years. The technological developments in the fields of transportation, communication, weapon systems with intercontinental ranges and weapons with global effect as well as development of international trade, have made independence a utopian concept. In its place what obtains today is the relativistic concept of interdependence.³ In the area of security, as well as other areas, this interdependence can either be symmetrical, as existing between the two super powers in the realm of nuclear weapons, where action and response are equally matched - or it can be asymmetrical as has existed between India and China in the field of nuclear weapons since 1964. The national objective thus boils down to obtain relative independence of necessary decision making by ensuring security through reduction to the minimum the conditions of asymmetric interdependence. This goal can only be achieved through the creation of relevant capabilities.

Often the terms potential or capacity and capability are used interchangeably and imprecisely. Potential or capacity is the presence of essential raw

* Lt. Col. A. A. Athale is a research scholar in the Department of Defence and Strategic Studies, University of Pune.

material for the build up of capability. For instance India has the world's 6th largest reserves of iron ore and 7th largest of coal. Thus she has the potential of being the world's major steel producer. Her capability of steel making based on the existing steel plants is merely 10/12 million tonnes per annum making her 16th in world ranking order in steelmaking. Throughout this paper the word 'Capability' is used in the sense of a ready and usable commodity that comes into being when potential through influence of willful action is transformed.⁴

Security as defined earlier has two components i.e. the material and the psychological. The material factor is based on the analysis of the adversaries capability and the psychological aspect is based on the way it is perceived by both the parties involved. The area of perception is highly abstract and defies clear understanding as well as quantification. The element of intent is inbuilt in the analysis of specific capabilities. As an example Chinese placement of MRBMs tipped with nuclear weapons in Eastern part of Tibet would indicate a clear intention to threaten the Indian heartland, an intent as clear as the similar placement had been in 1962 in Cuba. Our goal of achieving symmetric interdependence will need a careful analysis of capabilities around us and then examining countervailing capabilities creation as a viable strategy. A strategic analysis emphasizing capabilities fulfills the twin criteria of reliability and realism.

The Sino-Indian interactions since 1964 illustrate the effect of asymmetric security interdependence. Ever since 1964 India has followed a strategy of unilateral nuclear disarmament vis a vis China. In the initial period the justification was the meagreness of Chinese capability and later the rationale shifted to reliance on Chinese professed peaceful nuclear intentions. In practice, in 1965 during the Indo-Pak conflict China gave an ultimatum over problem involving some sheep⁵ and in 1971 had allegedly threatened a nuclear strike against New Delhi.⁶ In contrast in 1979 when China invaded and later got bogged down in Vietnam, Indian reactions were mute.⁷ Thus the asymmetry has led to Chinese capability to intervene in South Asian matters vital to Indian security precisely because India has no countervailing capability.

This lengthy framework would have its purpose served if semantics can be neutralised from further discussion. The justification of capability based analysis was also necessary to refute the oft-repeated charge of strategic analysts ignoring 'intent'. However if intent analysis is to be equated with content analysis then one might have to ignore the reality and believe that the Chinese MRBM's sole purpose is to shower rose petals on the Rajpath in

New Delhi and that the USS Enterprise sailed into Bay of Bengal in 1971 so that the US Sailors aboard could get a sun tan.⁸ While the worst case syndrome is to be avoided through a careful analysis of the specificity of capability, giving primacy to mere statements would amount to ostrich like behaviour and would also lack the virtue of prudence when the fate of our civilization is at stake.

THE ENVIRONMENT

No Margin of Error. Nuclear weapons are absolute weapons. Without going into the technicalities of measurement of the damage caused by blast, heat, radiation, local and global fallout and secondary effects, it will be accurate to say that even a crude 20 Kiloton (Kt) fission device is capable of wiping out a fair sized urban centre.⁹ Thus our analysis has no margin of error permissible. It will not be idle to speculate how much the survival of our 5000 year old civilization is credited to the intrinsic resilience and how much it owes to a navigational error and underdeveloped technology of killing. The fateful navigational error was made by Columbus on 12 October 1492 that led the European hordes to America and resulted in the destruction of Red instead of Asian Indians. (the former being as civilized, as numerous and as peacefully isolated as the later) The survival in the middle ages could well be attributed to the primitiveness and limitations of technology of killing and destruction based on sword and hammer. The nuclear weapons have solved this problem while the political intentions of at least some of our adversaries remain firmly rooted on the philosophical meta values that are based on the evil nature of man,¹⁰ in direct contrast to our universal humanism that is based on the concept of universal divinity, making concept of total war an alien one.¹¹ Quincy Wright in his study of war mentions that the first time the concept of universal humanism came up in Europe in the 19th century about 4000 years after our Upnishads. Therefore, neither the technology nor the intent leaves us any margin for errors.¹²

Concept of Non Super Power Nuclear War. Nuclear war per se being a world catastrophe and hence unthinkable is a fallacy. There exists a clear distinction between all out general nuclear war involving the obscene super power stockpiles and a proxy or regional nuclear war involving only 40 to 50 fission weapons of 20 kt. The general nuclear war will be an undoubted global catastrophe.¹³ In the second case it will be pertinent to point out that right up to 1963 partial test ban treaty, the world has learned to live with nuclear weapons going off in remote parts of Asia and Pacific. Though a regional disaster, the world at large would remain unaffected. Dr Henry Kissinger in 1956 foresaw the rise of Asian nations in the nuclear field. He

advocated that in order to protect world security from the threat posed by "weak, irresponsible or merely ignorant states, it will be necessary to make a precedent of use of nuclear weapons." Kissenger feels that this task of 'education' howsoever unpopular and presumptuous must be performed by the US as an unpleasant duty.¹⁴ Chances of this education taking place in South Asia are much greater than was the case with China, which atleast was still a part of the Yalta Framework. Prof. Roger Hillsman, a former Asst Secretary of State in the Kennedy administration, in a lecture to a professional audience at Poona University on 6 Dec 1985 clearly stated that a regional nuclear exchange between India and Pakistan is not going to affect the superpowers. The reality is thus far more menacing for India and of immediate relevance. Provided ofcourse we have got over the induced syndrome of regarding Black, Brown or Yellow lives to be expendable and cheap.

STRATEGIES AND COUNTER STRATEGIES

The evolution of Indian nuclear capability has to strive for establishment of countervailing strategy to counter three potential existing threats. A nuclear Pakistan, US nuclear and conventional capabilities in the Indian Ocean area and China that is graduating from strategy of dissuasion to deterrence. Indian capability in order to be viable for at least 10 to 15 years, has to also take into account the possibility of both the Super powers possessing the so called Star Wars capability, which in real terms is non nuclear weapons based counter force capability.¹⁵ The methodology of our analysis will be to consider one threat at a time and see its counter. In conclusion the overlap will be eliminated.

THE PAKISTAN FACTOR

Solely dependent on her indigenous resources, Pakistan that is industrially backward and one tenth of India's size, would pose no security threat. Table one below indicates it clearly.

Table I

	INDIA	PAKISTAN
Population (millions)	712	87.13
Technical Manpower (millions)	2.3	0.1
Production of Heavy Vehicles	91,000	6,400 per annum (assembly only)

	INDIA	PAKISTAN
Iron and Steel (million tonnes)	27.9	0.5 (pig iron only)
Energy (Billion Kw hours)	138	17
GNP (Billion \$ US)	210	56

Sources: 1. 'National Atlas of India', National Atlas and thematic mapping Organisation, Depart of S & T, Govt of India Publications, Calcutta, 1983.

2. 'UN Statistical Year Book' for Asia and Far East 1982, Bangkok, 1983.

The startling fact however is that today she is on the verge of posing a nuclear threat to India. The Pakistani threat can be dissected into two components, Pakistani hostility and Pakistani threat. Hostility by itself cannot pose a threat in view of the very obvious Indo - Pak asymmetry, just as Cuban hostility does not pose a threat to the USA. It is the Pakistani role as a US proxy that poses a security threat to India. In the field of nuclear weapons the following facts speak for themselves,

- The US waived the Symington amendment that would lead to an automatic aid cut off in the event of nuclearisation. A virtual go ahead signal.¹⁶
- Export of cryptons, an electronic device that is necessary to construct the conventional explosive based trigger.¹⁷
- Supply of nuclear delivery capable F-16 in order to provide a reliable delivery platform.¹⁸
- Despite a reasonable doubt about the Sino - Pak Nuclear connection the US has gone ahead with her China deal.¹⁹

The Pakistani hostility is inherent in the non viability of the theoretical foundations of the 'two nations theory' that is based on a phoney cultural and historical view, thus institutionalising the insecure feeling based on the permanent adversary and competitive role vis a vis a much larger India. To her credit there was a brief and abortive attempt by late PM Mr Z A Bhutto in 1972-73 when he sought to bring in a sense of realism in Pak psyche and Politics. The TV and the radio had constant ads on the need to give up the ostrich like attitude. The controlled media also gave a graphic account of the magnitude of defeat suffered by Pakistan in 1971, with the aim of shaking the

people to reality. Yet against the alliance of fundamentalist forces Bhutto had no real answer. There is a curious analogy to the German psyche, which rationalized defeat in both the world wars as having come about due to the Jewish machinations, ignoring the insurmountable geo-political forces ranged against her. There is a close parallel between the German - Jew and Pakistani - Indian self and mirror image perceptions. With such fundamental problems of long standing, one is tempted to see a parallelism in the solution as well.²⁰

The Pakistani eagerness to act as the US proxy is born out of the foundational weakness of the Pakistani state. The role enactment in both content and intent is not very different from the subsidiary alliance system of Lord Wellesley that had the Indian princes preferring British slavery to accommodation with native neighbours.

In concrete terms this dual Pakistani threat will be based on the available fleet of the 40 odd F-16 aircraft. These have a striking range of 925 Kms, thus threatening a minimum of 5-6 Indian urban concentrations. Assigning four aircraft per target (out of which 2 will be in reserve) armed with a 20-40 Kt device she can pose a threat to Delhi, Bombay High, Bombay, Pune, Ahmedabad and Hyderabad. Irrespective of the defensive measures, these aircraft have a more than 50 per cent chance of getting to their targets. With cent per cent reserve the success is assured. Even the dense Egyptian air defence in the Yom Kippur War of 1973 did not achieve an attrition rate higher than 20 per cent.

THE AMERICAN FACTOR

The US is a virtual regional power in the Indian ocean area since 1970s through her in situ capabilities which are as follows:-

- The rapid deployment force under USCENTCOM comprising of 3.5 divisions including two air borne divisions. The 9th US Air Force comprising of F-16, F-15, A-10 and transport support complement.
- US Naval forces of Cent Com based at Pearl Harbour has 3 carrier groups as well as Marine forces worth a division plus.
- Bases at Diego Garcia and in the Philippines.²¹

A careful analysis of the exercise 'Bright Star 83' shows that this force is meant primarily for regional intervention and not for a counter against

direct Soviet threat. The presence of airborne divisions, slower aircraft like A-10 and F-4 shows the expectation of operating under a condition of air superiority, possible only in the regional context and not against the Soviets. The absence of sizable ground/surface to surface missiles is also a pointer in the same direction.

To reinforce the Pakistani nuclear weapons in the South Asian region the US has its 9th tactical wing and elements of Strategic Air Command based at Diego Garcia with B-52 bombers armed with nuclear weapons, the total estimated punch carried is worth nearly 500 MTs. The kind of aircraft placed in the Indian ocean areas do not stand a chance to penetrate or survive a Soviet opposition.

The actual US threat to India is thus peripheral in nature and effect. India has the option of countering this threat by posing a similar threat to the US mainland or posing a threat to the US capability deployed in the Indian ocean area. Given the peripheral nature of the US threat and interest and also given the fact that the US mainland is covered by the USSR besides presenting unsurmountable technical difficulties for the time being, counter to it will not be necessary. On the other hand a credible threat to the US Centcom will indirectly pose a threat to the vital US interests in the Middle East and thus redress the existing asymmetry between the two and thereby prompt the US towards responsible behaviour in the South Asian region.

To counter the vastly superior US counter force and surveillance capability, India will have to depend upon a mobile sea-based capability, based initially on the surface launched nuclear tipped missiles, which can later be upgraded to a subsurface system. Cruise missiles based on surface ships also offer a cost effective alternative.

The sea based capability has the tremendous advantage of survivability, mobility and avoidance of co-lateral damage in the case of counter force strikes. It in effect also divides the adversary's forces. Built in its very nature is an all azimuth omnibus capability that lends tactical as well as strategic flexibility. This will reduce the Indian vulnerability to acceptable levels as through the device of this linkage the Indian security gets linked up with the Global nuclear balance and hence to the threat of a general nuclear war, which remains unthinkable. There is a very obvious contradiction in this hypothesis and the view prevalent in the 50s and 60s when India strove hard to keep herself away from the super power rivalry. The changed perspective is the logical outcome of the super power's shift from uncertain retaliation strategies of the 50s, to deterrence of 60s, flexible response of 70s and MAD of the 80s.

THE CHINA FACTOR

The Chinese threat is qualitatively different from the two earlier mentioned ones. The border problem notwithstanding there is hardly any issue where there is a serious clash of interests. The Chinese action in both 1965 and 1971 of threatened intervention in South Asia are in the classical imperialist mode. There is also an obvious connection with the Sino - Soviet relationship. Thus the Chinese threats could be rightly attributed to the lack of Indian countervailing capability - a low risk venture with high payoff in terms of thwarting a potential Asian competitor.

The Chinese short term strategy not unlike the Americans relies on the proxy role of Pakistan and supplements the US efforts in that direction. The Sino Pak nuclear co-operation is a clear sign of it. As China has advanced to build an effective ICBM force targeted on the USSR, it will have greater freedom of manoeuvre.

In the long term perspective as China develops her maritime power she is likely to want to use the Indian ocean for placing her sea based deterrence. Thus in the short term she is likely to operate through Pak proxy while in the long term she may well pose a maritime threat to Southern parts of India and island territories.

The Indian counter to Pakistani proxy would take care of the short term threat while the all azimuth force to counter US threat will be able to cater to a limited targeting of NE China Peking - Shanghai belt where 60 per cent of the Chinese industrial capacity is located. On the other hand given the primitive nature of the Chinese air defence and problems of geography even an aircraft based threat to her nuclear facilities at Lanchow, would be an effective deterrence to her intervention in the South Asian sub-region.

CONCLUSION

Independence of decision making is a necessary pre-condition for economic development - Indian national goal. This can only come about in an atmosphere of security, wherein there is no threat to our survival. In a world that is closely knit due to the advances in technology of communications, weapon systems and international trade, there exists a situation of interdependence in the area of security. When the interdependence is asymmetrical and one sided amounting to dependence, there is a security threat leading to nations becoming objects of coercive diplomacy.

India faces nuclear threat of a US China proxy in Pak, through spill-over of US capability build up to protect US gulf interests and a Chinese long term maritime threat.

In order to counter the above, Indian capability build up has to aim for:

- Nuclear war fighting capability vis-a-vis Pakistan in order to terminate her proxy role.
- Deterrence capability vis-a-vis China.
- Dissuasion capability vis-a-vis US through targeting the forces in being in Indian ocean area.

The Indian capability so built will be sea based, IRBMs with ERWs against Pakistan. The total megatonnage needed for the other two tasks will be 1500 Megatonnes in size so as to link the Indian security with global well being. The threshold is based on a US Academy of sciences report to the UN presented in 1984 on the issue of nuclear winter.

The emphasis on capability is also valid on account of control. Most modern conflicts can be attributed to the loss of control over the process. The strategy of uncertainty being followed by India since 1974 has two components ie, uncertainty of capability and that of intent. When capability is uncertain there is an inbuilt element of weakness of will. (intended or otherwise) Thus if credibility is to be considered as a strategic factor, strategy of uncertainty is strategy of bluff. There is an ever-present danger of the adversary calling the bluff and miscalculating in case there is a double bluff. On either count there is a danger of loss of control and a nuclear conflict breaking out. Once the capability is uncertain, then the vital decision making devolves on the capability builders, bureaucrats and technicians-leading to diffusion and loss of control. Once a viable capability is built up and the uncertainty is confined to 'intent', the control passes back to the highest decision maker. Only then can the conflict resolution through bargaining can begin to take place. In the former case it does not even begin, begging the question, bargaining for what? and with whom?

The adoption of creating adequate capability will give teeth to the peaceful intentions. On historical evidence and based on the universalistic humanism based meta values of Indian civilization, the world has nothing to fear. A strong India is the sole guarantee that the world does not pass totally into the hands of those who have genocides and resettlements of millions of hapless victims to their credit in the balance sheet of history.

Notes and References

1. Shama Sastry Dr R (trans) "*Kautilya's Arthashastra*", Wesleyan Mission Press, Mysore, 1923.
2. Morgenthau Hans J "*Politics Among Nations*" Alfred A Knof Inc, New York, fifth Ed, 1972. pp 16-24.
3. Keohane Robert O and Ny Joseph S "*Power and Interdependence*" Little Brown & Co Boston & Toronto, 1977. P.8.
4. "*UN Statistical Year Book 1980*" & International Iron & Steel Institute, report 1980, London.
5. *Times of India* 18 & 21 Sep 1965. Quoting PM's statement in the Parliament on 17 & 20 Sep 65 respectively.
6. *Times of India* 11 Jan 1986 quoting a 5 Jan 86 New Delhi report in which the Indian defence ministry source made the allegation regarding Chinese threat, denied routinely by the Chinese foreign ministry spokesman on 10 Jan 86. The denial only gives credibility to the original report.
7. Schubert J & Lapp R A "*Radiation*", William Heinmman Ltd London, 1957.
Kothari D S (Ed) "*Nuclear Explosions & their Effects*," Govt of India Pub Div, New Delhi, 1959.
8. Mankekar D R "*Pakistan Cut to Size*" Indian Book Coy, New Delhi, 1972, P.69, quoting Indian Ambassador to US.
9. The Indian reaction was confined to the foreign minister cutting short his visit to Peking.
10. Hobbes Thomas "*Leviathan*" E P Dutton & Co, New York, 1950, P. 105.
11. Wright Quincy "*Study of War*", Chicago University Press, Chicago & London, 1967, P. 619.
12. Mujumdar R C (Ed) "*The Vedic Age*" Bhartiya Vidya Bhavan Fourth impression, Bombay, 1965. P. 501 quoting the Upanishidas dating back to around 2000 B.C.
13. Schell Jonathan "*The Fate of the Earth*", Avon Books, New York, 1982.
14. "*Foreign Affairs Vol 34 No 3*" April 1956, pp 349-366.
15. "*Scientific American Vol 251 No 4*" Oct 1984.
16. "*Strategic Analysis Vol VII No 8*, Nov 1983, New Delhi, P. 582.
17. Op cit.
"*Military Balance 1985-86*", IISS, London, 1985, p.p. 134-185
18. "*Times of India*" 12 July 1985, B.1
19. "*New York Times*," 23 July 1985. Editorial on US China Nuclear deal.
20. Fundamental hostilities are enduring and come out at an unguarded moments. A British commentator describing the 1985 Wimbledon final, could not help but remark on the frightening efficiency & cool of a 17 year old German, Becker.
21. Kingston Gen. 'US central command' in Forum Summer 1985, Vol 10, Issue 1.

Star Wars and Countermeasures

COMMODORE BK DATTAMAJUMDAR, VSM

INTRODUCTION

During early 1980's, the U.S. planned to forge ahead in the ABM arena with a punch. Scientists thought about super advanced technologies involving lasers/ray/guns, neutral particle beams or projectiles etc that can be aimed through space at moving targets. The idea was conveyed to President Reagan by his friend-cum-adviser physicist Edward Teller who is often called as the father of the Hydrogen Bomb. Teller's idea moved Reagan so much that he formulated these notions of space based missile defensive system into a national policy-the "Strategic Defence Initiative (SDI)", somewhat on the similar lines as "the Manhattan Project" which developed the atom bomb. He came on the American TV to announce the new plan on 23 March, 1983 even to the surprise of many experts in his own government.

The salient features of the SDI, described by President Reagan as a non-nuclear research program, are to "Nullify the present and growing threat to the U.S and its allies which is posed by Soviet military power, replace the dangerous doctrine of mutual assured destruction (MAD) with a strategy of assured survival and provide both security and incentives for realising the enormous industrial and commercial potential of space." SDI plans to evolve new weapons (ABMs) - a system of satellites, space stations, lasers and the like in a decade or so to destroy the Soviet ICBMs before they can even reach the American soil and thus "rendering nuclear arms impotent and obsolete" - have been dubbed as the "Star-Wars", after the scientific fiction film by many indulging in fantasies. Filmmaker George Lucas, Creator of the scientific fiction trilogy, "Star Wars" had also threatened to go to court with a charge for copyright infringement. A new name for SDI has, therefore, been suggested as "Peace Shield". Scientists and defence experts, however, feel that such a system cannot be hundred per cent effective. Majority of Pentagon scientists also agreed that SDI would be "dangerously unreliable" because the system as a whole could never be adequately tested. The office of the Technology Assessment (closely linked with the U.S. Congress) in their report brought out that defence of the U.S population does not "appear to be a goal of the SDI program" because the system is unlikely to be totally reliable against all types of Soviet attacks. In other words, even one per cent ineffectiveness may spell disaster and render it totally useless. 100 per cent guarantee or none at all - there possibly would not be any runners-up in a nuclear war!

"Star Wars" is an American dream of total safety against all incoming missiles and MIRVs-complete elimination of nuclear weapons aimed to destroy

the USA. Star-wars will have layered defence - it is to be designed to kill all enemy targets during various phases of their flight. The boost phase is obviously the much sought after one, because during these 3 to 5 minutes launch period, any strike is expected to have a high probability of kill as upto ten warheads are still clustered atop the ballistic missile. After this phase is over, the ICBM ejects a "bus" which holds the warheads alongwith decoys. These warheads then spread to different trajectories and then they become extremely difficult to be spotted for kills. The last phase is when these warheads re-enter the atmosphere and all decoys are spent out. Ground based weapons can, if luck favours, shoot them down at this stage. But then, it is not free from nuclear radiation effects. In 1984, exercises were successfully carried out to kill an incoming Minuteman missile during this last phase. President Bush is also committed to "Star Wars" programme.

ANCIENT INDIAN STAR-WARS

Ancient Indian Sanskrit literature talked about battles between rival satellites and use of ray-beams to destroy them. Even descriptions of battle victims reminiscent of accounts of what happened after the atom bomb was dropped in Hiroshima are there and these have recently been translated in German and English. We have wished away all these as fantasy. But studies by Erich Von Daniken of Switzerland brought out in 1970 in a publication titled, *Chariots of the Gods* and in 1985 another of his latest book, *"Did I get it Wrong"* (Published in German) evoked keen interest world-over. According to these published works, Star-Wars is not just a future dream - it actually happened thousands of years ago. Gigantic space satellites, made of shiny metal and turning about an axis operated between Stars and fought Sky Battles between aliens! Smaller Crafts used to fly between the giant space stations and the Earth.

IMPLEMENTATION OF "STAR-WARS" PROGRAMME

The implementation of the "Star Wars Project" has been entrusted to SDI Director, Lt Gen James Abraham of the U.S. Air Force. He has since resigned from this job end 1988. Initial estimates of cost over a period of 5 years till 1988 were 26 billion dollars which may exceed much beyond this. What form of hardware is to be used is still largely being discussed and analysed. Government agencies and mostly private Aero-space industries are on the job to develop systems that could "detect, identify, discriminate, intercept and destroy ballistic missiles". Whether lasers or other beams are to be used is still to be decided. Even whether these beams will be ground-based or satellite-based has also not been decided finally. The preference, however, seems to be towards space-based

laser beams. Ground based beams can be countered easily by reflecting mirrors in space. It will take some more years before definite answers could be given. President Reagan himself said, "I think that would be way ahead of ourselves. We don't know what kind of weapon, if we were able to come up with one, that this would be".

Nevertheless Research is being continued to find the ultimate weapons. Even if it never produces a deployable space weapon system, technological breakthrough will usher in new ideas. The Soviets are also in the game and it is to be seen how they counter the SDI program.

POWER SOURCE FOR BULKY SPACE LASER-STATIONS

Production of Lasers requires lot of energy. Any space based laser system would require a very high source of energy fuels. For deployment of Star War Laser systems, the rough estimate is that energy fuel equivalent of what is required to generate 60 per cent of total of the U.S. electricity would have to be catered to the space.

According to the journal "Science", the U.S. department of energy has already sought the approval of the U.S. congress to build a nuclear reactor, type SP-100, to be ready after all required tests for launching into space aboard a space shuttle by 1993. This will generate electric power upto 300 KW for the SDI program in space and will thus become the "Corner-Stone" power source for the entire Star-Wars efforts. Earlier in 1965, the first ever successful nuclear reactor launched by the U.S. for her "Skylab" missions had developed defects only after a few months, even though it is still orbiting the earth. The success of such powerful nuclear reactors, as SP-100 is, therefore, viewed with lot of concern. SP-100 will be fuelled by highly enriched Uranium-235, operate at 1,000°C and be cooled by liquid Lithium.

LASER-BASED APPLICATIONS

While investigating global geo-physical changes, Scientists have concluded that the Earth's surface is constantly shifting-imperceptibly perhaps, but shifting all the same. Thus, the present configuration compared to that of the past is different, so will the future configuration be. This shift can be measured by putting special geodesic satellites up in the space and bouncing special type of high powered Laser beams off them. By measuring the travel time of the laser beams back and forth, minute movements of the earth's crust can be found out.

Laser has now found it's applications in data storage, be it for music discs or discs for computer memory-the CD (compact Disc, as it is called) revolution

is about to sweep the computer industry. The storage capacity of a 4.7 inch plastic CD is more than that of 1500 floppy discs or 50 Winchester hard discs-this huge capacity of about 500 megabytes can easily contain an entire encyclopedia. These will all find extensive use in the "Star Wars" program.

ARMS LIMITATION OR TOTAL DISARMAMENT-NEW DIMENSIONS

It is realised that our future lies in nuclear disarmament and not in nuclear build-up. All the castles of happiness and progress created all over this world of ours may crush down like a pack of cards in the event of a nuclear holocaust. While unabated nuclear build up is going on todate, all the powers are also talking about peace and nuclear disarmament simultaneously for many years now. In 1959, the Soviet Premier Krushchev had launched a proposal for general and complete disarmament-the elimination of all conventional and nuclear weapons over a period of four years. After two years of serious deliberations, America agreed to the proposal with a structured and technically detailed disarmament plan. However, during concentrated negotiations both superpowers realised to their utter dismay that complete disarmament was not a practical solution at all! This idea was again revived by the new Soviet Premier Gorbachev in recent times. He offered 50 per cent cut in strategic nuclear missiles, withdrawal of some SS-20s and a freeze on new strategic systems. He also desired a chemical-weapon free Europe and urged action to stop proliferation of chemical arms. Gorbachev has further proposed elimination of nuclear weapons from the earth by the year 2,000. He feels that the growing public opinion against arms race will ultimately eliminate all military arsenals from the face of the world. The Soviet leader has already proposed significant mutual reductions in land and tactical airforces for NATO and Warsaw pact countries and also conventional arms reduction. Both President Reagan and the Soviet leader Gorbachev declared again that neither of them would be the first to threaten a nuclear war. Earlier in 1985, the Soviets had unilaterally put a moratorium on nuclear testing and asked the Americans to follow suite. Despite no response from them, once again in the wake of the Chernobyl disaster, Soviets unilaterally extended the moratorium till August 6 which marks the 40th anniversary of the dropping of the Bomb at Hiroshima.

The recent signing of the INF Treaty between the superpowers has ushered in new hopes. Actual destruction of missiles under this treaty is now going on much within the public gaze. What a change!

RELIABILITY OF SPACE MISSIONS

For well over a decade, American spy satellites flew over the USSR and in 1978 the U.S. admitted it. Space shuttle Discovery's Mission 51-C also lifted off

from Florida's Kennedy Space Centre with a military intelligence satellite, placed to a geosynchronous orbit 22,300 miles above the equator. This will help to verify future arms control agreements by providing information on Soviet missile forces by monitoring a broad spectrum of Soviet electronic transmissions including broadcasts communications, some telephone conversations and telemetry from Soviet missile tests. Already about 14 missions of space shuttle are booked for the military and the U.S. airforce has built its own secret launching pad in California for military shuttles for use in October '85. On 01 April, 1986, a Tomahawk cruise missile fired from a submerged submarine 650 km off the California Coast homed onto its target, an aircraft in a concrete revetment on San Clement Island. The aircraft became a spectacular fireball and disintegrated.

Despite the above, the early 1986 saw quite a few major American disasters in space. On Jan 28, seven U.S. astronauts had died aboard the Challenger space shuttle as it exploded 72 seconds after take-off from Cape Canaveral. On 18 April, a USAF Titan rocket, allegedly carrying a spy satellite into orbit exploded shortly after launch. On 3rd May, the unmanned Delta rocket went out of control moments after lifting from Cape Canaveral and it was promptly blown up merely 91 seconds after take off. All these form the main stay of SDI programme and those failures are bound to lower its credibility. The failure of the European "Ariane" satellite launcher in May '86 further revealed that a fault-proof space device is yet to come.

SPACE SUPERIORITY-IS THE USSR AHEAD OF THE US?

Moscow has already carried out trials for its space shuttle which was guided back to a splashdown in the Black sea in December '84. Mr R Turnill, Editor of the authoritative Jane's "Space Flight Directory, 1986" clearly brings out the Soviet superiority in space programme and says that, "The Soviet lead in space is now almost frightening" - in that the USSR has taken a 10 year lead over the US and they are far ahead of the Americans "that they are almost out of sight". The Soviet astronauts have acquired great experience in space having clocked up more than 4,000 days in space as compared to only 1587 days by Americans, that too largely based on short flights of about 3 days at a time. The Challenger Space Shuttle disaster has shown many American weaknesses, even no contingency plans for space programme in case of an accident was ready at NASA.

NUCLEAR ANNIHILATION-LESSONS FROM THE CHERNOBYL DISASTER

April 26, 1986 saw a major accident at the Chernobyl nuclear power plant and realisation came in its wake that "a sinister force as nuclear energy has escaped control". The extraordinary and dangerous nature of the after effects of the

accidents were in no way comparable to that of an earlier nuclear accident at the Three Miles Island in USA in 1979. Radiation fallouts spread over to other countries upto 1600 Kms, polluting the environment. The radiation situation on the ground, surface, on water, and in the atmosphere is being monitored constantly. It became clear that nuclear threats as a result of even an accidental deployment will really have no confined boundaries of destruction - it would be an international disaster. While the real losses suffered and the impact of it for years to come is still to be realised, the main lesson to learn from the Chernobyl incident is to press on for nuclear test ban and nuclear weapon elimination. If a disaster of this magnitude could occur from the energy of the atom in a controlled plant, it is for anyone to surmise the possible consequences from uncontrolled mass destruction by this energy when nuclear weapons are deployed. "The accident at Chernobyl showed that an abyss will open if nuclear war befalls mankind. For inherent in the nuclear arsenals stockpiled are thousands upon thousands of disasters far more horrible than the Chernobyl one" - said Mikhail Gorbachev in a Moscow TV address on May 14, 1986, displaying Soviet concern over the possibility of a nuclear disaster, whether from nuclear power plant or from nuclear weapons. An international conference on nuclear safety was also held recently.

SOVIET COUNTERMEASURES TO "STAR WARS"

So to counter SDI program, the Soviets instead of copying it may go for a highly offensive system that would allow them to kill the US system or even to penetrate any defense the US erects. Soviet scientists in a special study report "Large scale antimissile systems and international security", have said that the American SDI programme is incapable of ensuring reliable protection from a retaliation and that laser stations in orbit can be destroyed quite easily. Various counter measures thought about are as follows:-

(a) The SDI stations in space are likely to be bigger than the ballistic missiles. Thus these big targets (fewer in number in outer space) can be easily aimed at carefully without any hurry as they would remain in the field of vision for a long time. Satellites filled with explosives can be sent into parallel orbits and blown up when closeby on ground commands or ground/space based laser beams can be directed to destroy them. These beams need not even be highly powerful as over a prolonged time even less powerful beams can cause enough damage to put them off.

(b) The Soviets are also thinking of developing small sized missiles with different basing modes and high thrust loading. Since SDI laser-stations are being designed for destroying strategic ballistic missiles, these stations, the Soviets say, will prove virtually ineffective against the smaller missiles.

(c) A particle of 30 gms moving at a speed of 15 Km per second can pierce a steel shell 15 Cm thick. It is not possible to protect a SDI space station from continuous bombardment of small particles at high speed.

(d) Even a small damage or a breach in the defence could be enough to make the system totally useless against 100 per cent defence. It is not required to totally destroy the platform, even a component failure could be catastrophic.

(e) Reluctantly upgrade and build up strategic arsenal even though these are violative of SALT treaties.

The US Scientists said that "STAR WARS" will not be the end of the arms race because of Soviet countermeasures envisaged. New countermeasures would follow and the race would go on and become more and more dangerous.

UPDATED SDI

The three year old concept of SDI has already undergone many changes and a "total conceptual change" is likely. Lt Gen James Abraham, Ex-Director of SDI organisation visualised development and deployment of a series of updated weapons in space to stay ahead of the Soviet efforts to penetrate the shield. A decision in the 1990's is likely to deploy several hundred satellite carriers with thousands of small rockets intended to strike incoming Soviet missiles. The SDI plan will no longer be only an "astrodome" shield to kill all incoming missiles. Now it has further been proposed to develop dual purpose weapons that could be used on both conventional and nuclear weapons with the insertion of a "Clip-on" nuclear warhead for applications on Navy Torpedoes and Army missiles. This will effect verification of SALT-II provisions since conventional and nuclear weapons would look alike.

Reports say that the US is developing new varieties of third generation nuclear weapons. The new technology called "Nuclear Powered Directed-Energy Weapons (NDEWS)" will also find use in the SDI program and will possibly be deployed to destroy missiles, attack satellites, incapacitate mobile missiles on the ground or even disrupt enemy communications. NDEWS produce stepped up type of energy in each explosion-be it X-rays, Gamma rays or micro-waves and the energy can be focussed on to a distant target. It is said that their testing is imminent and that is why the US is opposing any test ban in near future.

There is even a programme to develop a vehicle that could snatch satellites from high orbits and bring them into the space shuttle.

FIRST STRIKE CAPABILITY AND ADVANTAGES THERE-OF

The US Technology Assessment office has brought out in its report that if the defence systems themselves are vulnerable to a pre-emptive attack, it gives an advantage to the side that strikes first. If both the superpowers have similar limited defences, there is in fact an incentive for either side to strike first because the "ragged response" of the other side may be less damaging. These are all guesses-what will actually happen to the mankind at large is rather uncertain. Once weapons are developed and tested, their deployment will follow today or tomorrow. Hence the crucial factor is that there must be some agreement on stopping research and tests on further developments e.g space weapons. The future, therefore, depends on successful elimination of nuclear weapons because it "can really rob all mankind of its future", said Mr Gorbachev. He further wrote, "The evergrowing arsenal of reason and goodwill, the arsenal of peace, replenished by the aspirations of millions, is capable of eliminating military arsenals that threaten humanity". He concluded, "the future does not appear to me to be a silent and dark figure grimly and fatally looming up". It appears that deterrence is as much a state of mind as anything else. The usual method of measuring a nation's military capabilities by asking whether it can win a war against its potential adversary is really not applicable in the nuclear warfare. It is, therefore, more difficult to assess as to who is ahead of the other in the power game of the two superpowers. Numbers alone also cannot be blindly compared, Scientists think that a mere one per cent of the nuclear arsenal would be enough to cause a global "nuclear winter", a term coined by American atmosphere scientist Mr Richard Turco. It may block the sun by a thick dark cloud of smoke from raging fires and temperatures may plunge far below freezing-predicts a computer model analysis.

CONCLUSION

The arms race has intensified and after spending billions and billions of dollars and all the scientific and strategic developments, we may find that we have only bought greater instability than the world has ever faced todate. Instead of peace and happiness, are we not heading towards war and sorrow? There will be no boundary line of these in a nuclear holocaust. No one knows who will survive. Peace and freedom have their price. He who has rights and powers also has duties to perform. Every one talks about peace. Only comprehensive disarmament can render military means of securing peace unnecessary. Till then, may be the present concept of deterrance will remain as the only corner-stone for survival of the mankind. Like we have built up the arsenals of this world todate, we can also reduce it now onwards by patient and careful arms control efforts and by a dedication for peace alone. Unilateral disarmament for a short duration may be

OK, but nobody who holds political responsibility can really do so for a longer duration since it jeopardizes the security of the country. Today world peace is threatened not only by nuclear weapons but also by international terrorism, poverty, hunger and deaths in various parts of the world.

USI PUBLICATIONS

USI NATIONAL SECURITY PAPERS

Para Military Forces

by Lt Gen ML Chibber, PVSM, AVSM Price : Rs. 10.00

Defence Budgeting in India by Shri DS Nakra (Retd) Price : Rs. 10.00

Possible Counter Measures against Satellite Reconnaissance
by Air Marshal IW Sabhaney, AVSM Price : Rs. 10.00

Higher Defence Organisation
by Lt Gen SK Sinha, PVSM (Retd) Price : Rs. 10.00

Leadership in the Indian Army During Eighties and Nineties
by Lt Gen ML Chibber, PVSM, AVSM Price : Rs. 10.00

China's Strategic Posture in the 1980's (Revised)
by Lt Gen AM Vohra, PVSM Price : Rs. 15.00

USI SEMINARS

Report on Armoured Personnel Carriers
Chairman Maj Gen D Som Dutt (Retd) Price : Rs. 5.00

Report on the Imposition of a Manpower Ceiling on the Army
Chairman Lt Gen ML Thapan, PVSM (Retd) Price : Rs. 5.00

Retiring Age in the Armed Forces
Chairman Brig NB Grant, AVSM (Retd) Price : Rs. 7.50

Report on Recruitment into the Officer Corps
of the Armed Forces
Chairman Maj Gen D Som Dutt (Retd) Price : Rs. 5.00

Report on a Seminar on Cooperation in Defence
Chairman Lt Gen ML Thapan, PVSM (Retd) Price : Rs. 5.00

Report on a Seminar on Review of the Organisation
Pattern of the Indian Army
Chairman Lt Gen ML Thapan, PVSM (Retd) Price : Rs. 10.00

Report on the Military Threat in the Nineteen Eighties
Chairman Lt Gen AM Vohra, PVSM (Retd) Price : Rs. 15.00

Report on Nuclear Shadow over the Sub-Continent
Chairman Maj Gen DK Palit, Vrc Price : Rs. 10.00

Relationship of Military Law and Discipline with the Judicial System of
the Country
Chairman Lt Gen ML Thapan, PVSM (Retd) Price : Rs. 15.00

Report on Military and Society
Chairman Lt Gen AM Vohra, PVSM (Retd) Price : Rs. 30.00

USI NATIONAL SECURITY LECTURES

India's Problems of National Security in the Seventies
by Gen JN Chaudhuri Price : Rs. 10.00

India's Defence Policy and Organisation Since Independence
by Shri PVR Rao, ICS (Retd) Price : Rs. 25.00

Some Problems of India's Defence
by Air Chief Marshal PC Lal, DFC (Retd) Price : Rs. 25.00

Defence and Development by Shri HC Sarin, ICS (Retd) Price : Rs. 25.00

The Indian Ocean & India's Maritime Security
by Adm SN Kohli, PVSM (Retd) Price : Rs. 25.00

Internal Threats and National Security by Shri Govind Narain, ICS (Retd) Price : Rs. 35.00

USI JOURNAL CENTENARY NUMBER
Contains informative and authoritative articles Price : Rs. 25.00

Ask for your copy from :

DIRECTOR, UNITED SERVICE INSTITUTION OF INDIA

Kashmir House, Rajaji Marg, New Delhi-110011

Limits of Power: The US Military in Vietnam

PHILLIP A. ATTENBOROUGH

In this work we will not merely examine the military aspects of the war, dealing with troop deployments and overall strategy, but rather we will examine the entire picture so to speak. We will look at the political contributions to the war and how they shaped the military's role. We will also examine areas such as the American public opinion, the media and the role that they both played in America's defeat in Vietnam. As a conclusion we will examine the military strategy employed, its motives, the blunders, the misfortunes and the entire structure of the United States military during the Vietnam crises. In essence, we will be examining the downfalls which led to the limits of United States military power in Vietnam and touch on all of the major factors that led to the ultimate defeat and withdrawal of the United States military forces from Vietnam in 1973.

To begin let us discuss a little about the disadvantages that the United States were up against from the very start. The problems faced by the United States at first, were primarily political in their origins. The United States Government began sending direct aid to Diem's government as early as 1955. Over 900 US military personnel were stationed in the Republic of Vietnam by December of 1960. The American backing of a weak and corrupt South Vietnamese Government was already in process. However, did the United States have any choice in the matter? It seems that they did not, for it was either Diem or the Communists. It was merely a support towards the lesser of the evils! This is not to discredit the United State's decision to back Diem or any of the other corrupt puppet regimes that would come into being in South Vietnam - for she really had little choice in the matter. It serves rather as a starting point for this article, for Diem and his successors were the United State's closest enemy next to the communists themselves. These regimes had seemed to hinder the US military's power more than it had helped. Diem's government was in fact responsible for the initiation of the Strategic-Hamlet program in the spring of 1962, one that would create tremendous friction between the people of South Vietnam and both Diem's forces and the United States military in the years to follow.

The Strategic-Hamlet was a program used by the South in order to keep the southern countryside and its peasant populace under easier control. Fortifications were set up surrounding approximately 7,600 hamlets in South Vietnam and the South Vietnamese people were concentrated within the hamlets jurisdiction. Some 4,000,000 South Vietnamese were driven into these hamlets,

which has been estimated at 25% of the populace. The problem arose when the people refused to move into the strategic hamlets. On such occasions the Army of the Republic of Vietnam then turned to the use of artillery and aircraft to compel them to seek such refuge. This may hardly be seen as a successful strategy in winning the allegiance of the South Vietnamese people. In fact, many military-aged men of the South Vietnamese peasant populace joined the National Liberation Front of South Vietnam in response to Diem's military rule. There was an immense upsurge in the popular grievances of the peasant populace who were now refugees due to their own government's inability to handle a crisis. They had been robbed of their rights to their own possessions, but that was not all. The camps into which they were forced, have been described as "a concentration camp of sorts", and in 1969 a senior ARVN strategist admitted to the sheer brutality of the program. So we may recognize that from the beginning, the United States was at odds with the incompetence of the Republic of South Vietnam. It should be mentioned however, that after the Diem regime had fallen in November of 1963, the United States' interest in controlling the southern rural population by such means, had been withdrawn to a great degree. By 1966, the United States military had reduced fortified hamlets to the maintaining of some 3,800 remaining hamlets. Although in refraining from examination in detail of the RSVN and its armed forces under the corrupt leadership of the military regimes, it should be well noted that the Republic was on numerous occasions a hindrance to the US military. One might well recognize that the RSVN was in fact one of the many obstacles that was to limit the power of the US military in Vietnam.

Before examining the US military itself, it is necessary to examine the governmental policies of the United States and the American media and its effects on the US military. In essence, the themes of America, its policies and its general public opinion should be examined so that one might recognize the tenuous position held by the US military at that point in time. Colonel Summers, an active officer in the US Army, has of late written a few excellent works from the military perspective, which have revealed many important areas of debate. His examinations are based on the military perspective of how a nation at war should conduct itself in order to successfully sustain a victory. His work entitled *On Strategy: The Vietnam War in Context*, is based primarily on General Clausewitz's work entitled *On War*. Clausewitz was a military and political strategist of the early 19th century, who wrote on the art of warfare. Summers also uses his past experiences in Korea, in trying to examine the Vietnam problem.

On examining the American Home Front during the Vietnam War, Colonel Summers divides his work into several categories. Those being the "National Will" of the American People, the Congress and the "Friction" posed

by both of these groups. It appears that the loss of Vietnam in part, was due to the collapse of such national will. The American public's support for the war was never enthusiastic to begin with and as the war raged on, the public's support for the war began to further deteriorate. Summers adds that President Johnson was largely to blame, for he made the decision not to mobilize or invoke a national will. Johnson feared that such a policy might jeopardize his "Great Society" programs, inevitably jeopardizing his own political career. From this, Colonel Summers draws his first conclusion, stating that Johnson could not commit the army without first committing the American people - after all, it is those people that would fill the ranks, support and maintain that army. Colonel Summers further states that "when the army is committed the American people are committed, when the American people lose their commitment it is futile to try to keep the army committed".¹

It was not however, President Johnson alone, who had failed in his duties. It was merely an unfortunate event, that this crisis was to coincide with a social upheaval in America. The "Age of Aquarius", with its flower children, civil rights activists and New Leftists, created an atmosphere which was most non-conducive to waging a war - a war that the ruling class was exploiting to sustain "the decadent capitalist system", or so they spouted.

One of Johnson's greatest blunders however, was that he had refrained from creating a formal declaration of war, believing perhaps that by that point in time it would be seen merely as an antiquated formulation and would therefore be uncalled for. Colonel Summers however, feels otherwise. He states that by not declaring a formal state of war against North Vietnam, Johnson had not legitimized the relationship in the eyes of the American society and this he feels was an immense value to society. For the declaration of war in its substance, was the mobilization of the American people. "The failure to invoke this national will was one of the major strategic failures of the Vietnam War. It produced a strategic vulnerability that our enemy was able to exploit".²

The lack of the national will among the American people was a tragic enough disadvantage for the United States military to function with, but the friction created, had become absolutely intolerable. This was a friction that would inevitably find its way to the fighting front. American anti-militarism, has since the beginning been part of the American makeup, a trait that numerous other democratic free societies share. Americans, generally speaking, have never loved the military, but have rather trusted and respected it in the past, calling upon it during times of crisis when America's liberties and freedoms were being jeopardized by other militaristic authoritarian nations. Colonel Summers asserts however, that during the Vietnam war, trust and respect were also denied

by many Americans. He states further, that Government policies tended to aggravate this friction rather than smoothing it over. This was accomplished by granting draft deferments for students, which only led to class upheaval and antiwar militancy. The students only tried to appease their own consciences by swearing that the war was immoral. And so it was, after all what war is not! However, it went a little further than that. Vietnam was found "morally intolerable", other wars in the past however, were just as gruesome and cruel, but the American populace felt that was different. The war was also found morally repugnant. "By supporting a corrupt, authoritarian government the United States was betraying its own principles".³ The United States however, had no choice but to support the Republic of South Vietnam for several reasons. Her only other option would have been to militarily occupy the entire nation and I am sure that such a policy would not have been acceptable neither at home nor abroad!

Who was responsible for creating the strong antiwar feeling at home? A great majority of that responsibility fell upon the shoulders of the American media. Television coverage of the war's brutal reality was brought into the living rooms of all the American television viewers. The destruction of the country side and its inhabitants through napalm bombings and artillery barrages were televised nightly. The plight of the refugees, the torturing of prisoners (that of which was permissably shown), and the political assassinations, were subjects that motivated many Americans to act in the radical manner that they did. As far as Americans were concerned, it was different. Vietnam was fought in "cold blood", not in the "heat of passion", as other wars had been portrayed.

The media played a most vital role at that point in America's history and at times played her role rather irresponsibly. The American media had not in fact brought the "reality" into America's living room, but rather had distorted and in certain instances had misinformed the American public entirely! In reviewing a video tape entitled "Television's Vietnam: The Impact of Media", which was produced and distributed by: "Accuracy in Media", revealed the failure of the American media machine all with valid evidence, just as its public, was anti-American militarism and indeed had shown this strong feeling throughout much of its ultra-critical representation of what was supposedly happening in Vietnam. The media's treatment of the Christmas bombings, the struggle for the American embassy in Saigon, the defence of Khe Sanh by the US forces and the Tet Offensive in general, was handled with an extremely anti-American shadowed outlook. The under exposure of the Hue massacre as compared to the over exposure of the My Lai massacre, forces one to wonder just who's side the media was really on. As Colonel Summers indicates, "instead of the passions of the American people strengthening and supporting us, more vocal and in passionate

voices were too often raised in support of our enemies".⁴ It also makes one question the relationship between an inaccurate and distorted media and its effects upon the American populace. Would the American people have turned on their fellow countrymen if they had been more correctly informed? At any rate, this does not discredit the important role and the impact that the media had instilled in the American populace during the War, but rather holds them ever responsible and most certainly one of the many factors that attributed to the limitation of the United State's military power in Vietnam.

The lack of a national will and the friction imposed by the American Congress and Bureaucracy was also to hamper the US military position in Vietnam. As already indicated, Johnson's refusal to declare a formal declaration of war upon the enemy had caused a grave consequence between the American people and the war effort itself. It appears that the Army had become the center of antiwar sentiment rather than the Congress. Colonel Summers believes that Johnson had recognized the strong antiwar sentiment and had shifted the blame onto the military, so that he and his government might be able to avoid any radical repercussions. He further blames the President for listening only to advisors whose views he thought were correct. He states that the Congress evidently believed that the military professionals had no worthwhile advice to give and that the military by default had allowed the strategy to be dominated by civilian analysts and political scientists. Whether or not Colonel Summer's analysis is completely correct, it is most likely that the Congress and the politicians including the Presidency, had turned to fighting the war in such a manner. The economical concerns of the military strategy took priority. Economics is an element which is impossible to evade in any war, but Vietnam seemed to stretch that point. McNamara's Planning, Programming and Budgeting System (PPBS) approach to the United States military strategy seemed to dominate the Pentagon's approach. It became the center of the focus for questions posed towards the military.

In examination of the US military and its limits of power, four seemingly important areas should be reviewed. These categories are divided into the following: the political factors including the concept of pacification, the use of firepower and its consequences, an examination of the United States military and its functional operations, and finally, the concept of strategic and political objectives.

Firstly, in examining the political problems that limited the United States military power in Vietnam, Townsend Hoopes, a high ranking officer in the United States Air Force during the Vietnam War, believed that Westmoreland was greatly responsible for the lack of recognition placed upon the theory of

political pacification. As discussed earlier, the Diem regime and the use of the Strategic-Hamlets had also lacked in pacification of the South Vietnamese population. Hoopes further states that Westmoreland's search and destroy operations that forced millions of refugees from their land, was indeed a "strategy of attrition". The rural South Vietnamese became in most cases, sullenly anti-American. He believes that Westmoreland's strategy was never "subjected to critical analysis by the authorities in Washington".⁵ The United States Army was not merely anti-Vietnamese but it was also antagonistic towards the Army of the Republic of Vietnam, and on several occasions simply asked them to be removed from the operational theatre. The US military recognized the Government of Vietnam's lack of organizational drive and reforming zeal and they were entirely correct in recognizing such. However, they were not playing the game so to speak. The US Army refused the theory of pacification and in the long run paid the price.

The Government of Vietnam was indeed systematically corrupt. It was inefficient, could not protect or govern large areas of South Vietnam, and therefore lacked popular support. It has been estimated that by 1968, the Government of Vietnam had the support of only 30% of its populace, most of whom were living in the larger urban areas. On the other hand however, Ho Chi Minh and Hanoi, had harnessed nationalism, determination, organization and fighting qualities that were far superior to their southern counterpart. It is felt that the North Vietnamese leadership had mobilized the northern civilian populace, which made a great psychological impact upon its people and their war effort. The US military and the Army of South Vietnam however, was creating public opposition and dividing the war effort. Ironically enough, Townsend Hoopes sums it up quite well by stating, "We are progressively tearing the country apart in order to win the hearts and minds of its people".⁶ How could a victory possibly be sustained in such a situation?

The US military in Vietnam, it has been said, had never developed an appropriate strategy for war, but rather assumed the mere application of vast military power and felt with over confidence that the application of such firepower would be sufficient. "The solution in Vietnam is more bombs, more shells, more napalm ... till the other sides cracks and gives up".⁷ (General Depuy, one of the principal architects of the search and destroy strategy). The heavy application of firepower in Vietnam by the United States military, had in effect created many hardships for the military. Militarily speaking, it had on the whole, served its purpose. The economical and social consequences were most prolific however!

Gabriel Kolko an American historian who now teaches at York University in Toronto Canada, argues that the US military had turned to the increase in

military spending and firepower as a result of the loss of political support from the people of South Vietnam itself. Ultimately, he believes that the United States had become too dependant upon their military technology. "It was our policy that after contact with the enemy was established, our ground forces would pull back a sufficient distance to allow artillery and fire power to be used without restraint. Then the Army would follow up these attacks".⁸ The immoral repercussions of such a strategy were exploited by the media to its fullest, as previously discussed and were brought into the living rooms of the American populace. Such a strategy was not only seen as immorally repugnant, but rather, it was not conducive to the average American's pocket book. It has been estimated that over one-third of the war's cost was due to the maintenance and production of such technological war machinery.

The use of the helicopter, although it had proven itself invaluable, had at the same time revealed true numbers and approximate locations while in the field. The element of surprise was therefore broken. Westmoreland had himself stated that by the time the war had progressed, the helicopter and numerous other military advancements had become extremely vulnerable to enemy ambush. North Vietnam's anti-aircraft missiles and MIG fighters (Russian aid), had played havoc with the United States Air Force over North Vietnam. Townsend Hoopes at that time had even questioned the effectiveness that his bombers were achieving. Late in 1966, a Pentagon journalist had concluded that "the huge array of new American gadgets and weapons was not adequate: US brain power had been baffled by the wily and resourceful Viet Cong who is fighting his war on the cheap".⁹ Yet without the helicopter, some 1,000,000 more United States troops would have been needed to patrol South Vietnam. What was the answer? In 1966 the war had only cost \$5.8 billion, and yet by 1968 it had climbed to an astonishing \$26.5 billion. The American public would not accept a larger military budget and they would surely oppose the conscription of 1,000,000 more American boys! It appears that there was no correct answer under the given set of circumstances.

The US military itself was also effected greatly during this war period. Summers believes that "neither our civilian nor our military leaders dreamed that a tenth-rate undeveloped country like North Vietnam could possibly defeat the US, the world's dominant military and industrial power. Our military leaders evidently assumed ... the US would prevail regardless of what strategy was adopted".¹⁰ The military had made the cardinal military error, in that it had underestimated the enemy. The military had failed in its role as the primary military advisors to the President. Therefore the military failure was not completely due to Johnson's actions, but more correctly his military advisors. There furthermore seemed to have been a disunity of Command in the United

States forces at that time, commands of which were formulated in Honolulu, others in Washington and yet others in Vietnam. This lack of "Command Unity" ultimately led to an uncoordinated action on the field, in the air and on the sea. A common goal was therefore never achieved due to this lack of unity.

Numerous grievances had arisen within the US military itself, in particular, those dealing with the division of military expenditures. The Commander-in-chief of the Pacific was of the Navy and therefore demanded a larger portion than was deemed necessary. The role of the helicopter in air mobility was placed under that of the Army, needless to say the Air Force was not pleased. Such jurisdictional issues escalated as time went on.

During that period the US military hierarchy had greatly deteriorated. The problem of "careerism" had reached a high. Vietnam was used as a means of rapid promotion within the ranks, after which one would leave behind the problems in Vietnam without future concern. The problem would simply be left up to the next soldier and the next soldier would follow the same pattern. There appeared to be a lack of pride in the war effort, no sense of concern to win the war - simply wanting to get out of it in one piece.

Attendance in the United States ROTC dropped off. No one wanted to go to "Nam". Kolko also mentions that the American GI lacked the political commitment to South Vietnam. Destruction of crops, villages, and perhaps even the My Lai massacre can be seen as a direct reaction of such docility towards that commitment. The wide spread use of drugs in the military became a major problem by 1970. Oddly enough the Republic of Vietnam was the supplier! The US Military Assistance Command, Vietnam (MACV) in Saigon was passive towards the problem fearing that a conflict would only arise creating a distasteful political atmosphere. In 1972 the drug problem became so bad, that some key US bases allowed prostitutes into the barracks, in hopes of reducing the drug usage!

Tensions between officers and enlisted men heightened as the war progressed. By 1970, Kolko feels that the "human collapse" of the GI had become evident. The discipline and the very capacity of the US armed forces had become questionable. Racial problems between Blacks and Whites intensified. Mutinies and insubordination became rampant. Fraggings of officers became an outright sentence to those officers who pushed their men to the brink. Antiwar feelings were not merely at home but they had strongly permeated within the ranks of the United States armed forces in Vietnam.

The most vital of all concepts during this war, was that of "Limited War" and the objectives portrayed through such a policy. US strategic policy called for the

containment, rather than the destruction of the Communist power. The doctrine of Limited War was conducted by Johnson and the Pentagon, and based on the fears of nuclear war, and possible intervention from both China and Russia. Colonel Summers asserts that instead of attacking the source of the war, that being North Vietnam, the US Army turned to the defensive role, eliminating the Viet Cong threat in the South. There was a definite confusion over objectives of a political and military nature, and due to such confusion, the US Government found the Vietnam crisis difficult to deal with. The political objective was to attain an independent South Vietnam functioning in a secure environment, through a policy of counterinsurgency. The military's objective however, was "to assist the Government and its armed forces to defeat externally directed and supported Communist subversion and aggression".¹¹ In essence, the US policy of limited war was calling for the defeat of North Vietnam by forcing a negotiated peace similar to that of the Korean experience in 1953. Colonel Summers believed however, that North Vietnam fought by the old rules - "victory being their ultimate objective". It seems that he was correct!

Due to America's lack of an offensive strategy towards North Vietnam itself, American land forces were ultimately placed on the defensive. The enemy was therefore allowed to build up its land based forces with only minimal interference, that coming from American Strategic Bomber Command. The main North Vietnamese forces henceforth prepared and deployed their forces as they pleased. When the time was right for their offensive, they would attack. If a retreat was called for, they would simply withdraw north of the Demilitarized Zone and redeploy. The United States however, would have to repulse the offensive, and suppress the Viet Cong simultaneously, and there would be little time for the US forces to lick its wounds. The US military was always on the defensive - even when it was on the offensive! How could a military force of any caliber, be victorious under such a predicament?

It is understood that the US military was quite capable of winning a decisive victory in Vietnam, given suitable conditions under proper guidance. As shown in the Tet Offensive and the Easter Offensive, American Armed Forces proved themselves beyond the shadow of a doubt. On both occasions the North Vietnamese standing army had proven itself inferior to the overwhelmingly superior United States forces. Under the discussed conditions that were imposed during this conflict however, it seems that a victory would have been impossible. Johnson's policy of Limited War was the greatest of these disadvantages. His justification of this policy however, is debatable. For the negotiated peace in Korea had been proven successful. How could Johnson have known that North Vietnam would not choose a similar condition? From the field of honor to the war effort at home, America did not seem prepared during this period in

her history to deal with such a conflict. Continuous misfortunes, one after another hampered all prospects of a feasible victory. This article was not merely an examination of the limits of power of the United States military in Vietnam, but rather an examination of the American people and America herself.

FOOT NOTES

1. Summers, *On Strategy: the Vietnam War in Context* (USA, 1981), 7.
2. *Ibid.*, 12
3. Herring, *America's Longest War* (USA, 1979), 171.
4. Summers, *Ibid.*, 17.
5. Hoopes, *The Limits of Intervention* (USA, 1969), 63.
6. *Ibid.*, 189.
7. Herring, *Ibid.*, 152
8. Kolko, *Anatomy of a War* (USA, 1985), 189.
9. *Ibid.*, 193.
10. Summers, *Ibid.*, 74.
11. *Ibid.*, 64.

BIBLIOGRAPHY

1. Herring, G. *America's Longest War: the US & Vietnam*. USA: John Wiley & Sons, Inc., 1979
 2. Hoopes, T. *The Limits of Intervention: an inside account of how the Johnson policy of escalation in Vietnam was revealed*. USA: David McKay Company, Inc., 1969.
 3. Kolko, G. *Anatomy of a War*. USA: Pantheon Books, 1985.
 4. Palmer, B. *The 25 Year War: America's military role in Vietnam* USA: University Press of Kentucky, 1984.
 5. Summers, H. *On Strategy: the Vietnam War in Context*. USA: Strategic Studies Institute, US Army War College, 1981.
- * "Television's Vietnam: The Impact of Media" (Video Tape) Distributed & Produced by: Accuracy in Media (1275 K Street, N.W., Suite 1150, Washington, D.C. 20005)

Micrographics in Defence

BRIG TV MANOHARAN, VSM

INTRODUCTION

The organisation which first made use of Micrographics in the world was Defence, as far back as World War - I. Microfilming was used as one of the tools of warfare in the activity of spying. Even currently the James Bonds of today continue to make use of this technology. However, Defence does not merely mean fighting or warfare, it embraces within it numerous activities such as selection, recruitment, training, placements of units and personnel, logistics, financial management, production of military hardwares etc. As a matter of fact, if all activities were to be listed, it would be a voluminous document which itself might need micrographics. Out of these, I am shortlisting the following to indicate the potential for exploitation of micrographics in Defence:-

- (a) Recruitment/Selection/Pre-induction training.
- (b) Post-induction training and career planning.
- (c) Finance Management.
- (d) Design, development, manufacture and Quality Assurance of military hardware.
- (e) Logistics/troops movement.
- (f) Strategic Application like Planning, execution of military operations.
- (g) Record Management (operational and non-operational)
- (h) Standardisation and Codification.

Before we go further, I would like to remind you of the advantages of utilisation of micrographics which are; security, savings of space, time and manpower, easy retrieval and reproduction, quick transmission of documented information. All these will have some bearing or the other on the items mentioned above which we shall now consider.

RECRUITMENT, SELECTION, PRE-INDUCTION TRAINING

Selection/recruitment of Officers and other ranks in the three services is a voluminous and continuous ongoing exercise. For example, let us take the case

of Officers. Every six months there are about fifty thousand applicants out of which 400 or so are selected for undergoing training at NDA. At the NDA the equivalent of a 'Janam Patrika' (Horoscope) starts. The activities of the cadets are under continuous monitoring and the recordings of the instructors are required to be maintained till they pass out. By employing micrographics it should be possible to weed out the unsequential records, microfilming the significant ones and destroying the original papers. Very efficient and easy methods are now available for quick retrieval of documents, by which as and when any reference to a past significant entry is required, it can be done without having to maintain voluminous old records. In comparison to officers, the intake of soldiers, airmen and sailors is colossal, probably 10 to 20 times more of the work involved in case of officers. I leave it to your imagination to gauge the benefits and the importance of micrographics in their cases.

POST-INDUCTION TRAINING AND CAREER PLANNING

Post-induction training is aimed at overall development of a service man to make him better equipped to shoulder higher and higher responsibilities as he climbs the ladder. It also helps in his becoming more effective during discharge of his duties in any specialised field. A doubt can arise in your minds, as to why an ordinary computer cannot serve the purpose. I shall clarify this point in my conclusion. I have mentioned it here so that this point does not nag your minds.

FINANCIAL MANAGEMENT

All documents pertaining to finance are, of necessity, required to be preserved for a long duration. Many of the documents are needed only for reference purposes. Although the need in defence is common to the need in other organisations/departments, there is significant difference which makes the defence requirement unique. This will be clear by an example. It would be of little value for a hostile country to learn that Shri Bihari Lal, Post Master of Bareilly has been granted special pay for acquiring higher education in telecommunications, but the fact that Commander Bihari Lal of Indian Navy has been granted special pay on account of his being a sub-marine expert or Major Bihari Lal being granted special pay because he is a trained pilot in the Army Air Corps etc., are informations which we would not like our enemies to know for obvious reasons. Similarly, the documents on payment of Rupees One Million to the Irrigation department for desilting a canal would need no security classification, whereas documents relating to payment of Rupees One Million for executing the work of constructing a Helipad in an Operational Area would need a high security classification. In Defence, as in other departments, by employing micrographics

we not only save space but also render much higher degree of security in this field. The Controller General of Defence Accounts caters for lakhs of employees of the three services and Ministry of Defence. He is required to exercise control of thousands of Defence Units spread all over the country. Voluminous documents are required to be preserved by his subordinate offices for long durations and there is considerable frequent movement of bulky documents. By establishing a few mother units and by providing reader printers in smaller units, considerable modernisation can be achieved, resulting in enhanced efficiency and greater economy. Thus, Microfilming can be of immense help to us in the field of Financial Management.

DESIGN, DEVELOPMENT, MANUFACTURE AND QUALITY ASSURANCE OF MILITARY HARDWARE

In the development stage, a number of changes are made on the drawing board. In the experimental stage, in many cases, it is desirable to have a print of the sheet before amendment. This is necessary specially when there is a need for reworking from an earlier take-off stage. Without employing the microfilming technique in such case, we could be forced to start ab-initio. For productionisation of each item, engineering drawings and specifications are needed. If you consider a very common item like a Fountain Pen, it would need about 10 drawings and references to about 6 specifications. Again, for inspection, you would need gauges for which also drawings and specifications will be required. From this, you can imagine how many drawings/specifications would be required in case of a rifle. The figures for items like Aircraft, Submarines, Tanks are mind boggling. For free flow production these drawings are perforce required to be used on the shop floors resulting in their becoming oily and unusable necessitating frequent replacements. By employing the micrographic system the present system of taking out ammonia prints can be done away with and reader printers can help in timely provisioning of such drawings/specifications. In the Defence, each main equipment, specially warlike equipment, History Sheets (HS) are maintained from womb to tomb for each of them. When an equipment is transferred from one unit to another the HS accompanies it. The HSs are of great help during maintenance and defect investigations. In some cases, even the target sheets on which firing has been done, are maintained by QA units. Instead of retaining all these sheets/documents, they could be stored in the form of microfilm/fische.

LOGISTICS/TROOPS MOVEMENTS

In the Defence Services, logistics is the life line. What is the requirement, by whom it is required, where it is to be supplied, when and how to be supplied

are the questions which arise before a supply is made. However, after execution of the work, the supplier has to be in possession of proof of demand/supplies in the form of documents. The supplying agencies in Defence have to be on their toes all the time. During periodical checks, audits and inspection and also during enquiries/investigations, in case of failures, copies of all such documents are required to be produced/reproduced. In Defence, you cannot afford to lack in such matters. But then the documents are so voluminous and bulky and many a time you do not know whether these are ever going to be needed or not. What is the answer? Obviously Micrographics.

Movements of units at short notice are a common, regular and unique feature of the Defence Forces. Secrecy of the movements is also to be maintained. Each unit has its own records which are again bulky and difficult to transport. By resorting to micrographics what is transported, by trucks can be carried in a few brief cases, with better security.

STRATEGIC APPLICATIONS

Strategical activities which are so vital for the defence of the nation are a peculiar requirement of the armed forces. Here we come to the vital requirement of security. Micrographics are like a two edged knife. One may say; it is easier to pilfer the microfilms or fisches than to take away a bulky file. I would say; it is easier to provide security cover to a small room where all these microfilms/fisches can be stored in a small almirah and access to that area is limited, than to a large area where more man-power and other elaborate arrangements may be required to provide security cover for a large volume of documents and where accessibility control would also be very difficult.

It would be easy to pass on documented information through microfilm or fische to any area under an escort rather than to send original paper documents under elaborate security arrangements. These are few examples to quote the advantages of micrographics as far as strategy/security is concerned.

RECORD MANAGEMENT

Any large organisation with such a vast network requires a very high percentage of manpower to be centered around documentation and its procedures. You may be aware that the amount of paper work generated by such organisations is beyond imagination. This can be categorised into two types as far as Defence is concerned. These are 'operational' and 'non-operational'.

(a) *Operational*: Under this category, records like battle orders, strategic/tactical plans, movement of troops etc are held. These records require top-most

secrecy. Here again, the micrographics can be exploited to great advantage. Further, a document may get generated at Headquarters level and may have to go down to unit/station level. These documents can be passed on for comments to the lower levels in microfilm form and availability of reader printers upto unit level can take care of the rest.

(b) *Non-Operational*: Here again the service records of all personnel and officers, have to be maintained and records kept for a long period. The most important of all are the financial and medical documents of all officers and personnel. This demands a vast records area. Sometimes, it becomes difficult to trace the old records of an officer because of the large area, voluminous documents and tedious manual retrieval. These problems can be overcome if micrographics are introduced with facilities for retrieval.

STANDARDISATION AND CODIFICATION

Army Standardisation Organisation will have its own technical information centre, where a large variety of technical books on numerous subjects/foreign specifications and all technical information pertaining to national and foreign products are stored, retained and distributed. Defence Standardisation Directorate is one such department where all technical details pertaining to defence needs of both Indian and foreign organisation are stored. We also get information from abroad and microfilms/fisches authenticated original document. Micrographics have become the order of the day and with a little bit of innovation and creativity, it can be put to use in Defence in almost all fields.

The Colonel Commandant Syndrome

A DERELICT BRITISH RELIC

BRIG N B GRANT AVSM (RETD)

Every now and then, atleast twice a month, there appears a news item in all the national papers, of some senior military officer being appointed as the Colonel Commandant of a regiment. It is bad enough the average military officer not understanding the true significance of this redundant institution, but I am sure, the civilian understands it even less so. Of late, many of our military journals have also carried articles on this subject, ending with Brig A S Apté (Retd)'s one published in the Jul-Sep 87 issue of the USI Journal, followed by series of letters in its Apr-Jun 88 issue. However, the matter still remains unresolved, and worse still, ununderstood. Even diehard infanteers, for whose benefit the system of Colonel of the Regiment was evolved, are now veering round to the thought that, this appointment is as derelict for the Indian army, as the JCO rank. Nevertheless, as with all our outlived military traditions and institutions copied from the British, we appear to be scared stiff of changing any thing, even the English ranks of Sergeants and Corporals in our Air Force.

Colonel, traditionally the commanding officer of a regiment, is the highest officer rank below the general officer grades in most armies, or below brigadier in the British and Indian Services. In the 17th and 18th centuries, the colonelcy of a British regiment of infantry or cavalry implied a proprietary right in the organisation. Whether or not the colonel commanded the regiment in the field, he always superintended its finances and interior economy, usually to his profit. In time of war the sovereign invariably selected the generals for his armies from among the proprietary colonels. Meanwhile, active field command of such a regiment was exercised by its lieutenant colonel. As the grade of general became permanent, many generals retained their proprietary colonelcies.

Thus by tradition all British regiments have a senior officer (serving or retired), styled 'colonel of the regiment.' He acts as the father of the regiment, and is usually one of its distinguished senior officers. His duties are confined to certain specified domestic matters of purely regimental concern. He may be any rank above lieutenant colonel, but is usually a general. Corresponding to the colonel of a regiment, there is the title 'colonel commandant' in relation to a corps.

As the tactical doctrine, customs of the Service, the badges of rank, and almost everything else about the Indian Army still follows the British pattern,

even in the concept of colonel commandants we seem to have adopted the system blindly. I find that this bug has now bitten not only the other arms and services of the Army, but more recently it has also penetrated into the culture of our navy and air-force as well, although no such need has been felt in the Royal Navy or the Royal Air Force, around whose traditions our two corresponding Services have been built. I guess for the sake of uniformity (entailing inter-service co-operation and all that) they have been labelled as Captain Commandant and Commodore Commandant respectively in our organisation.

Unlike the other arms and services, after the rank of a lieutenant colonel, the infantry officers branch off to the general cadre and are lost to their regiments, as such they felt the necessity of having an officer of senior rank to represent the regiment or sponsor its cause at the highest level. Thus each infantry regiment had a 'godfather' in the senior ranks to look after the welfare of that regiment.

The above conditions however do not exist in the same manner in the technical arms and services. Take the Corps of Engineers as an example. The Sappers at present have on their Corps establishment itself fifteen general officers, including two lieutenant generals, not to mention the four more today in General Staff appointments. They have therefore sufficient representation in the higher ranks within the Corps itself, to look after their interest and sponsor cases on behalf of the Corps. This being the case, it is for consideration, as to what can a colonel commandant of the Engineers achieve which the E-in-C, and for that matter the other general officers of the Corps, cannot do so in their existing appointments. Whether an officer appeals to the E-in-C in the latter's capacity as the head of his Corps or in his capacity as one of the colonel commandants, is not going to make the slightest difference as to the way in which the appeal will be processed. In fact, if anything, as E-in-C, he will be able to exert more influence than he will be able to do so as a colonel commandant. Thus whereas in the infantry, where the highest rank in the regiment ends with a lieutenant colonel now colonel, the necessity was felt for a general officer to be associated with it to look after its interest, such a condition however does not exist in any of the other arms and services for obvious reasons.

If Colonel Commandants in the Army are associated with the various regimental centres, those in the Navy and Air Force are linked with the various naval branches and air force formations respectively. However, the kind of permanent emotional attachment that an Army man has to his regiment throughout his career, cannot manifest itself in the same way to a

branch or a formation of the Navy and Air Force. This can be attributed to the traditions and career pattern prevailing in these services. Hence, although the other two services can now be proud of also having their own Captain/Commodore Commandants, however, their respective responsibilities would have to be based on traditions quite different to the regimental concept of the Army from which they have been carbon copied. In this respect I am told that, traditionally in the Royal Air Force the emotional attachment of the airman is to the Squadron, and in the Royal Navy the loyalty of the sailor has always been to the Service. I am not aware of how the Indian Navy and the Indian Air Force have sorted this out in relation to their respective Captain and Commodore Commandants.

Notwithstanding the above, the new rule whereby an officer has to relinquish his appointment as the Colonel Commandant on retirement from the Service, to my mind has further diluted his effectiveness. In this connection it will be appreciated that, no matter how bold an officer may be, he will always be guarded when writing or saying things to higher authorities at the level of the Chiefs of Staff, while still serving. However, on retirement, he can afford to be more forceful and say things to his former Chief, which he would not dare to do so while in service. It is for consideration therefore, as to why not allow an officer to complete the balance of his tenure as the Colonel Commandant even on retirement, as it used to be before.

Seeing the way our police have also started copying all aspects of army traditions, including the stars systems, and the signia of cross-sword and baton (instead of lathi and hand-cuffs), the time is not far off when, even they will demand a Superintendent Commandant for their forces. If the police get this, then why not the administrative service, who will also want a Secretary Commandant (they already have a Secretary General) for their IAS cadre.

It is time we took a stock of the whole concept of Colonel-Commandants and review it in the light of today's requirements. Although such an institution may have had a real meaning and a dire necessity in the days of 'king and country', it appears to be a bit of a joke, and out of context in the Indian socialistic setting, and more so after the inflation in the senior rank structure of all the Services as a result of the two cadre reviews. Let us muster the courage to scrap this derelict 'British' appointment, which on the face of it, today not only appears farcical, but even hypocritical.

Be It Ever So Humble

RAJNI LAMBA

As children of an always-on-transfer-Army officer father we have had interesting adventures at the various stations he had been posted to. The range of dwellings and the populace we cultivated is indeed vast. We learnt many lessons in human tolerance and sustenance.

In Shillong, the pleasures of living in an arcane house were revealed to us only after the initial bout of experimentation. On the dinner table one day, Daddy asked for the inevitable "muki bhan pyas" to go with the deluxe dal. As the floorboards were wooden and looked fairly worn, Daddy placed the onion on the wall and hit it with the heel of his palm. The onion just disappeared we gaped in wonder at the hole that was glaring down at us as a gentle shower of clay lime and straw stormed the dinner-table forum.

In Bihar the floods were to become an inseparable memory for us. In July-August orders would go out that all families should share the first-floor dwellings and leave their belongings at a central store which was considered to be well above the water level. Invariably the Ganga, Pun Pun, and Son waters would spare our perches and attack the arid zone around the central store with a vengeance. For weeks after the flood waters had receded, droves of army kids would go out on fishing expeditions to try and salvage their mothers precious cutlery, crockery and what-have-you. Even today we have a myriad collection of forks, knives and spoons.

In Jammu we shared our "home sweet home" with snakes and their mongoose enemies. During the bountiful monsoons the roof was covered with canvas sheets. This arrangement provided an ample breeding ground for an entire tribe of militant mongoose who immediately declared war on the snakes who had been living in harmony atop my brother's study room. Anyway, they provided hours of entertainment for us children as each selected his champion and cheered him on. Luckily, our mothers knew nothing of this, or else ...

In the region of highest rainfall in India, somewhere near the Cherapunji area we had the Kitchen outside the main living quarters. This factor proved a bane to our cook's culinary skills for, whatever he prepared for our repast was somehow spiced and seasoned by the prevailing weather conditions - usually pouring rain. As 100 cms of rain pelted panditji on his way from the kitchen to the dinning room, our chapatis came swimming in a sea of floury

water, the rice was usually in the form of gruel, cold and very fluid. In fact it would be no exaggeration to say that we had to all but don scuba gear for conjuring up a bean from the "rajma" and dal preparations. Poor panditji, our cook par excellence, quit in tears and set off for sunny UP, his homeland to redeem his faith in his ability.

Yet wherever we may have lived we enjoyed ourselves to the utmost as Daddy would brief us beforehand - and elaborately at that - about the topics and issues that found favour with or were taboo, as well as the plus point we could pick up from the people and cultures of these beautiful lands. Always there was the security of knowing that "be it ever so humble there's no place like Home" ... and for most army children "home" is where "Daddy is".

Human Aspect of the Indian Soldier*

MAJ GENERAL VIRENDRA SINGH (RETD)

I shall be speaking on the Human Aspect of the Indian Soldier about the soldier who also has a parallel existence as a Man, as a Social Being about his hopes and aspirations and his personal problems. Whilst there is no question about his contributions to the country - is the country doing enough for him.

Having been fed on a surfeit of historical and mythological tales of past hostilities, stories focussed almost entirely on the "Knights" and the "Leaders" as "Heroes" to the exclusion of the foot-soldier who bore the brunt of the fighting - from the "face-less hordes" of Ghengis Khan to the "thin red line" at Waterloo, the awful carnage at the Somme, the Marne and Verdun - the civilian man-in-the-street may be forgiven for overlooking the average soldier's claim to personhood. But, if any single development can be said to have been the key to raising the level of sophistication and effectiveness of today's army, it is perhaps the fundamental change in our view of, and our attitude towards, the modern fighting man. This holistic view did not develop overnight, but it has paid - and is continuing to pay - rich dividends in the informed and intelligent cooperation of the modern soldier within the army and in his greater mutual sensitivity and empathy with his civilian counterpart.

I want you to visualize in your mind just two images of the Indian soldier engaged in doing his duty. The snow is deepening once again in the world's highest mountain range and the Indian soldier will continue his wintry vigil along the Indo-Tibetan border. His job is to maintain a peace of sorts, while a political solution eludes the Government in Delhi. But the Indian soldier will not question why.

Again, the Indian soldier is part of the 80,000 Peace Keeping Force in Sri Lanka in a unique role of restoring peace in a foreign country and making supreme sacrifice in the endeavour. There may be debate and more than one opinion on this particular role assigned to the Indian soldier, but he will not question why.

Here I would like to define certain attributes - that assist in formulating the character of an Indian soldier. These are military definitions.

First is Leadership that is provided to the soldier. There are scores of definitions of Leadership, but the most explicit, compact and all encompassing

*Text of a talk delivered at the Festival of Life International Congress, Bombay on December 13, 1988.

is the definition given by a Medical Officer in World War II. According to him - "Military Leadership is the capacity to frame plans which will succeed and the faculty to persuade others to carry them out in the face of death".

Second is Discipline which is the basic fibre of the soldier. A simple definition would be that it is a systematic method of obtaining obedience. Discipline is training that is expected to produce a particular character or pattern of behaviour, especially that which is expected to produce mental and moral improvement.

Third attribute is Courage which can be defined as the state or quality of mind or spirit that enables one to face danger and overcome fear.

And lastly is that enigmatic quality of Morale which is quantified as three times stronger than physical strength. Morale is what enables a man in adverse situations to keep his self-confidence and discipline and remain cheerful. The state of morale in a soldier or in his unit is in direct proportion to the state of their fitness for war.

When we talk about Leadership, we in fact are talking about the Officer cadre. Lest an officer forgets the priorities, the following words of Field Marshal Lord Chetwode are enshrined in golden letters in the Chetwode Hall at the Indian Military Academy, Dehradun:

"The Safety, Honour and Welfare of Your Country comes first, always, every time".

"The Honour, Welfare and Comfort of the Men you command, come next."

"Your own Ease, Comfort and Safety come last always and every time."

When I referred to the human aspect of the Indian soldier, I was referring to him as a man, as a social being and how he was treated in the Army and the Officer-Soldier relationship.

When I painted an image of the Indian soldier guarding the inhospitable frontier or fighting in Sri Lanka to restore peace, I also said that he will not question why. But I would like to caution you that today's Jawan is no longer a gallant blockhead who is only ready to do or die. Today, he is a literate person with an inquiring mind and, therefore, understands what he is doing and because he understands he also approves. Therefore, he does not question why. But we

must at the same time ensure that we ask of him what is just and what is right. He has implicit faith in us - we must not betray his faith.

There is widespread terrorism in the country - there are communal holocausts and cancerous political instability and corruption. The system of kickbacks has long existed but what has provoked public scandal today is the scale of pay-offs and the level of acceptors of pay-offs. In a country thus infested, there is an imperative need to sustain the morale of the Indian soldier. He is still professionally the best soldier in the world. Considering our country's vastness, its multi-lingual population, disruptive pulls of caste and creed, provincialism and illiteracy - the silver lining is the Army which is one single wholly predictable, reliable and immutable force of stability. As long as the Indian soldier retains his special ethos of a completely apolitical professional fighting man, dedicated to the ideals of service to the country through his regimental mystique, loyal to the Government elected by the people, Democracy will survive in our country.

I would like you to visualize once again in your mind the image of a soldier who has just joined his unit after completing his basic training at the Centre. He has come from a rural background, a rustic simple and God-fearing soul, trusting, willing and eager to prove himself. He places himself entirely in the hands of his officers. The first correct impression he forms is when he knows and feels that his officers care for him and share with him his joy and his hardships. CARE is a simple four-letter word but perhaps the cornerstone of the edifice on which Officer-Man relationship is based. Here, I would like to relate an incident. Gen. Mathew Ridgeway had assumed command of a very demoralized US Eighth Army in Korea. The day he arrived he went to the front and by then it was getting dark. He saw a young marine who was heavily laden and unable to bend to tie his boot laces which had loosened. The marine called out to a group of soldiers standing near by - "Hey will one of you tie my laces?" Gen. Ridgeway knelt in the mud and tied the marine's laces. This is what caring is all about - being sensitive towards another person's needs and feelings. How many of us care as much for our men? For that matter, how many of us care at all?

What is it that is precious to the Indian soldier on the personal level? He wants respect and to live with dignity and honour. He wants encouragement, an occasional appreciation of his work and an occasional thank you from his superiors. He wants his problems to be treated with kindness and understanding and problems he has many in today's socio-economic times. The soldier of today is basically the same as of yesteryears except that since 1947, he is better educated and, therefore, more responsive to correct and inspiring leadership. He is more mature and expects more from his officers - he likes to be taken into confidence and accepts responsibility more readily.

It is the peace time mission of an officer to mould his men into a cohesive, winning and enthusiastic team. This demands great personal attention and understanding of soldiers as individuals. Officers must strive to learn the regional language of their men, their customs and religious mores; share with them their meals in the langer and attend with them religious discourses in their temples. An officer in his formative years should tour villages and areas during a part of his annual leave from where his men come. He should know his men's entitlements - all about their salary - rations and leave. An officer may demand obedience from his men, but men's respect he has to earn.

What is most precious to the soldier is his family and, therefore, Family Welfare is an important subject for officers to study. Men must be confident in their minds that when they are away from their families doing duty in inaccessible and inhospitable terrains, their wives and children will be looked after - that when they die their widows and orphaned children will be taken care of. When officers are taught man-management, family welfare forms an important part of it. Neglect of a jawan's family can cause immediate demoralisation and a demoralized unit is unfit for war.

Another aspect of morale is the need to ensure financial security for men on retirement. As you know, a soldier retires after 15 years service when he is in the prime of life and has another 25-30 years of active life ahead of him. But, he retires at an age when he is burdened with maximum responsibility to provide for his family and educate his young children. Government must do its utmost to rehabilitate retiring servicemen and provide opportunities for employment. Government must also appreciate that ex-servicemen are the largest reservoir of trained and disciplined work force which can be gainfully employed in national reconstruction and development. Defence forces are a symbol of national unity and integration. This asset must never be frittered away.

Officers serve their men. It is not the other way round. Gen. Patton had said that the badges of rank which an officer wears on his coat is really a symbol of servitude to his men. This aptly sums up the officer-soldier relationship. Gen. Taylor had also said that "A reflective reading of history will show that no man ever rose to military greatness, who could not convince his troops that he put them first above all else".

Like any fever or disease, discontentment among troops throws up certain symptoms in a unit. If an officer has his fingers on the pulse of his unit he will know immediately when his men are unhappy and more importantly, why.

Increase in the number of applications for premature discharge, in cases of indiscipline, in cases of desertion or Absence without Leave or Overstayal of

leave, in cases of sickness rates or hospital admissions especially in the psychiatry ward are all symptoms indicating that the unit is unwell.

Every soldier is like a delicate sapling. He is to be nurtured with care and kindness, pruned with wisdom, sheltered from the elements, supported in distress, nursed in sickness and allowed to grow unfettered. When he errs, he is to be justly punished, but always with compassion and understanding. Then when the flower begins to bloom, we can sit back with pride and enjoy the show.

Officers will do well to remember that no man is a Leader until his appointment is ratified in the minds and hearts of his men.

I wish to end my talk now by reading out "An Officer's Prayer" which in fact is an ode to the Indian soldier.

The Officer says -

"Lord make me worthy
Of the men I serve.

(Please note that the Officer wants to be worthy of the men he serves - he does not say worthy of the men he commands. This is exactly what I referred to a little while ago when quoting Gen. Patton that the badges of rank are a symbol of servitude to men and not to be displayed as a symbol of authority).

Worthy of their loyalty
and Devotion to Duty.
Their wond'rous willingness
and ready laughter.
This great humility
that asks so little,
and gives so much,
so readily, without complaint.
Grant them simple wishes, Lord,
and bless them please,
For in this world, no better soldiers breathe
than these.

Cantonments: Colonial Relics or Military Necessities

LT GEN E A VAS PVSM (RETD)

The concept of a cantonment arose from the dual need of quartering and providing allied services to the armed forces when the British ruled India. The location of any military unit in an undeveloped area had to be supported by a variety of services such as tailors, barbers, tradesmen and shop-keepers. Gradually, a small bazar grew up adjacent to the garrison with consequent development of certain civic amenities such as parks, gardens, hospitals, burial grounds and schools. A cantonment, therefore, had two identities: the military area where the troops were quartered and the civil area which provided the allied services. Under Lord Kitchener's reorganisation plan (1903), 19 cantonments were established. Subsequently, various additional cantonments were built by the British.

Cantonments were originally located well apart from the main civil population, local villages and towns. However, with the passage of time and the rapid increase in population, the older cantonments have invariably merged with the expanding adjoining municipal areas. While the military areas still remain an open and orderly layout, albeit, somewhat dilapidated in many cases, the civil area of a cantonment is in no way different to its adjacent municipal zone, either ethnically, culturally or commercially and is even regulated by civilian agencies such as traffic police, despite being under the cantonment's administration.

THE CANTONMENT ACT

Cantonments are categorised and organised according to the population; the existing constitution for cantonments is limited by the Act to Class I, Class II and Class III cantonments. The largest, where the civil population exceeds 10,000 is termed as a Class I Cantonment. Cantonments are governed by special rules which were formalised in the Cantonment Act (1924). This was last amended in 1983, and provides for the constitution of cantonment boards, and an organisation to cater for the various functions of general administration, revenue, engineering, sanitation, public health and so on. A Class I Cantonment has a total staff of about 850 civilians who function under a Cantonment Executive Officer (CEO), a civilian from the department of the Defence Estates Organisation, Ministry of Defence. However, this organisation was never meant to cater for a civil population approaching one lakh, with all the attendant problems which a modern city faces today.

A cantonment board consists of elected civilians and nominated military officers. This functions under the local military Station Commander who in addition to his main military duties which are quite considerable, also has the subsidiary duty of ex-officio President of the Cantonment Board. The President has two roles related to the cantonment: to preside over the deliberations of the Board and to administer the military and civil areas. Administering the military area is tedious but has not proved difficult due to the inherent discipline and clear-cut chain of command in our military organisation. But control of the civil area through the cantonment board is extremely diluted and unsatisfactory. This is particularly true of large cantonments where the population of the civil area is about 10 times the figure originally conceived as a Class I Cantonment.

POPULATION DENSITIES

An examination of Pune Cantonment's composition and organisation is of interest as this is a typical cantonment which has grown too big to be properly managed. 50 years ago, the Cantonment formed the periphery of Pune (Poona). Today, it is surrounded on all sides by the city. Only military units and the families of serving soldiers are located in the military zone, together with about 200 civilian families residing in bungalows allotted to them by the British through special grants. In Pune, the military zone consists of 93 per cent of the land; the civil area with a population of one lakh has only seven per cent of the land. The military zone is generally clean and open, though many of the bungalows have a dilapidated look. This is because the rules and regulations governing reconstruction and repairs to "old grants" bungalows have inhibited their repair and upkeep. This problem is receiving separate attention by the Defence Ministry. Despite the run-down appearance of some parts of the military area, the quality of life therein is better than that prevailing in the civil area, which consists of 78 per cent of the total Cantonment's population; the military zone has 22 per cent.

Though the congested civil area may be judged by some as satisfactory when compared to its neighbouring municipal area, it will have to be admitted that this has to face many problems which are heightened due to an ineffective and out-dated organisation in which channels of command and responsibility no longer work satisfactorily. The President of Pune Cantonment Board is also the Station Commander Pune, and Commander Pune Sub Area. His main responsibility is to administer the 44 military establishments and units located in Pune Sub Area which covers the whole of Maharashtra less Bombay and a few districts. But because Pune Cantonment Board and its affairs attract attention in the local press, he is forced to devote extra time to the Cantonment at the expense of his primary task. Moreover, the organisation of Pune Cantonment is not designed to cater for a civil population of one lakh, nor is he trained to deal

with problems facing a modern city. The average CEO is an experienced administrator, but he is not supported by adequate professional advice. The organisation lacks town planners, architects, civil engineers, sanitation experts and legal advisers. The law and order situation is satisfactory but threatens to pose problems in the near future due to the rise in unemployment and the traffic in drugs.

CURRENT PROBLEMS

Due to indifferent controls, builders took advantage of liberal laws in Pune Cantonment and a spate of high-rise buildings mushroomed in the civil area between 1979 and 1982. This has resulted in the growth of influential commercial groups and a powerful builder's lobby which exercises considerable financial pressure on Board members and Cantonment staff, specially when building activities worth crores of rupees are at stake. In December 1982, strict restrictions were imposed by the General Officer Commanding-in-Chief, Southern Command. This curbed building plans, but has resulted in a series of court cases. The Board is today contesting some 46 High Court and three Supreme Court cases. Moreover, some builders are going ahead with questionable constructions. This gives rise to adverse public comments by enraged citizens and environmentalists, and results in fresh legal tangles.

There are other inherent managerial weaknesses in the present organisation. The Police looks after the traffic, law and order. Residents in the cantonment who get little satisfaction from complaints relating to these issues, become frustrated and critical of the de-jure control of the army. The civilian staff of the Defence Estates Organisation are also not under direct army control. Their promotion, transfer and discipline, and day-to-day working systems, are controlled by the Defence Estates Organisation, New Delhi, through the CEO concerned. In a large cantonment like Pune, the CEO is unable to cope with the multifarious problems single handed. Matters are further complicated because the Sub Area Commander, as President of the Board, has no direct control over the cantonment staff and civil agencies.

Pune Cantonment Board consists of seven civilian elected members, four nominated military members and three ex-officio members who belong to the administration. In the old days, the voting pattern generally followed the informal directives given by the President, and there were no major problems. But the times have changed. The elected civil members have to be responsive to their vote banks, and the pressure groups formed by commercial and building interests. Thus, there have been occasions when the seven elected members have voted as a group against official policy on important issues. If all the nominated

and ex-officio members are present (a matching total of seven) the voting on any issue would be a tie. In that event, the President is authorised a casting vote. Unfortunately, this provision and safeguard is nullified if any one of the four military members is absent; this often happens when military officers are posted out at short notice. The new nominee, even if named promptly, cannot vote until his name has been gazetted by official notification. This often takes months due to red tape and bureaucratic lethargy, during which time the Board has to function without their vote; the President therefore has no opportunity to exercise his casting vote.

The main source of income of a cantonment is derived from a share of municipal octroi on a population basis. The other taxes that are levied are lower than those levied by the neighbouring civil municipality. A large proportion of the meagre budget is spent on pay and allowances, leaving little for developmental work. Finances are further crippled by the heavy cost of legal expenses which in Pune Cantonment alone, amounted to over rupees two lakhs in 1985. Unless the Octroi share is revised, and a new tax structure introduced, the Cantonment will soon find itself in a severe financial crisis.

SUGGESTED REMEDIES

For the reasons discussed above, in Pune Cantonment, civil amenities are seriously stretched, public utilities are inadequate, sanitation is deteriorating and traffic hazards increasing. This situation calls for one of two alternative remedies. First, improve the organisation and system of work. This involves giving the Board adequate staff to exercise proper supervision; this is not possible because of financial restraints. Any restructuring of the system would necessitate a reorganisation of procedures to give the army direct control over the civil staff and law enforcement agencies; this is not possible in a democracy. Thus the first remedy is not a practical proposition. A second suggestion is to excise the civil areas from the Cantonment and hand this over to the adjoining municipality. This proposal is welcomed by the army because it would reduce the administrative burden, and the civil areas are anyway no longer relevant to the functioning of the cantonment. Moreover, the army is earning a bad name whilst attempting to look after a growing civil population with inadequate resources in a role for which it is neither trained nor organised. This suggestion is not unique.

The civil area of Ambala Cantonment (Haryana) was excised in 1977 as a result of recommendations made by a Committee which investigated the problems facing that cantonment. But many are opposed to the suggestion that the civil areas should be excised from military cantonments because this will result in a loss of finance. This is true, but a cost study will reveal that the overall

budget position will be improved as the revenue lost is less than the cost required to meet the minimum expenses needed to maintain the civil areas satisfactorily. Others are reluctant to adopt this suggestion because of a false desire to retain prestigious civil areas. Apart from this, elected members of the Board are against this step as they will lose all the power they now enjoy, and will then have to merge their identities with the larger municipal corporation where they may never be elected in that wider franchise. Lastly, the civilians residing in the cantonment are also against the step because they know that the army, despite all its handicaps, maintains a "personal touch" within its jurisdiction, and attempts to look after the civil areas and population with a devotion and sincerity which the residents may not receive from a large dispassionate corporation.

MILITARY REQUIREMENTS

Because the civil areas are clearly no longer relevant to the functioning of the military areas, a few misguided enthusiasts proclaim that military cantonments, themselves, are a relic of colonial rule and quite irrelevant in free India. This conclusion is fallacious. Military stations are an unavoidable necessity for three (among other) basic reasons. First, at any one time, the army has about one third of its strength deployed on the borders or located in "hard" areas where families are not permitted. The remainder will be located in cantonments. (One-third would be resting after having returned from hard areas, and one-third would be getting ready to go to a hard area). Second, cantonments not only house personnel and their families, but also expensive equipment such as tanks, missiles and guns which require special structures to protect them from the sun, rain and temperature. Moreover, lethal ammunition has to be housed in magazines designed to ensure safety. Readers may recall the devastation created in Islamabad (Pakistan) when an ammunition dump blew up in 1988 killing hundreds and destroying a large number of houses. Lastly, every unit, while in a cantonment, has to carry out routine training with its equipment. This requires a minimum of space to enable movement and routine weapon training and tactical drills, with maximum security. For these and other reasons, every nation has some form of military area to house its armed forces in peacetime. In the USA, such areas are termed "forts" but these are in fact like our cantonments in every other respect.

However, modern units, unlike their colonial counter-parts, are self-contained organisations which no longer require to be provided with allied services manned by civilian shopkeepers or tradesmen. Thus, the army, whilst planning new cantonments, does not need civil areas which were unavoidable in the old cantonments. For example, since 1947, and after the Sino-Indian Conflict of 1962, the army has had to move into north-eastern India in a big way. Today, Eastern Army is, man-powerwise, the largest command. It has built, and is

building, new cantonments for its troops and families in under-developed tracts all over Bengal, Assam, Sikkim, Arunachal Pradesh, Meghalaya, Manipur, Tripura and Mizoram. Yet, there is only one cantonment officially listed in Eastern Command -- Darjeeling (Bengal) which was built many years ago by the British.

The "cantonments" which are being built today do not function under the Cantonment Act of 1983 because these do not have a civil area. These are purely military areas which function like any other industrial unit: as self-sufficient and self-managed estates which are provided with bulk electricity and water on contract from the state governments concerned. The Military Engineer Service (M.E.S.) looks after housing, power, water and roads; the Army Service Corps provides the rations and the Canteen Service provides the rest. Thus, there is no need for a civil bazaar or a civil area as in the old days.

CONCLUSION

Today, a large number of environmental groups and civic bodies are taking an unusually keen interest in the activities of Pune Cantonment. Significantly, these organisations have refrained from excessive comment and criticism of the neighbouring Pune Municipal Corporation. This is perhaps because the army authorities give one and all a patient hearing, and sincerely attempt to respond to workable suggestions. Thus, the focus of the environmentalists has been centred on the small 250 acre complex of the civil area of Pune Cantonment. While this interest is laudable and has been of assistance, as these groups function in a "watch dog" capacity, their criticism has sometimes been one-sided and overdone, specially when such "exposures" gain press publicity and suit their own purpose. Recently, an environmental group obtained a Court injunction which permits it to examine documents and files pertaining to the Board. This has far reaching implications on an all-India level; even effecting all Government administrative organisations, if ratified by the Supreme Court. It is time that the army took steps to protect its reputation.

If the army excises all unwanted areas from its old cantonments, and continues building its new "cantonments" without civil areas, it should be able to solve the major administrative problems facing its cantonment boards. Anyway, it is time that the army sheds its unwanted civil areas which it is neither organised nor trained to administer.

Have A Large Beer

RAJ BIR CHOPRA

A CADET NO LONGER

Before the Second World War, it was the custom that cadets from the Indian Military Academy, Dehra Dun, after completing their two-and-a-half year period of training and being granted an officer's commission as Second-Lieutenants would spend their first year of service in one of the several British infantry battalions then stationed in India, commanding a platoon of some forty and odd British soldiers. The same rule applied, it should be added, to British Second-Lieutenants who, having completed their cadet training at Sandhurst in England, elected to serve in the Indian Army. One has never quite understood the rationale behind this procedure, unless it was felt that if the newly-commissioned officer was going to make a fool of himself, he had better be allowed to do so with some British troops who would have him commanding them for only a year, rather than with the Indian jawans whom he would have the honour to command for the rest of his career as a regimental officer.

So it was that, in July 1936, I found myself on my way to Kasauli in the Simla Hills, with orders to report for duty with the 1st Battalion of The Cheshire Regiment. I still recall vividly the wonderful feeling that filled one's whole being. The long stint as a cadet at Dehra Dun, which seemed as if it had lasted a life-time, was over at last; and the sense of trepidation at the thought of commanding British tommies - how was one going to tell one from the other, because they all looked alike under those enormous khaki helmets? - was not to invade one until the morrow.

THE FIRST NIGHT

I arrived in the afternoon by taxi from Kalka and was escorted by a Regimental guide to my living quarters - a bedroom - dressing room - bathroom suite in a bungalow which was shared by four bachelor officers. My bearer, whom I had employed a few days earlier in my home-town of Sialkot, was an old hand and knew all the ropes; being a raw young bachelor officer's valet was a piece of cake for him. It took him no time at all to find his bearings. Having brought my tea and toast from the Officers' Mess which was a hundred yards away, he unpacked my boxes and bedding and set out all my belongings in a matter of minutes, ordered the *bhisti* (water-carrier) to heat an old Kerosene-oil-tinful of water for my bath - a hot bath is welcome in Kasauli even in July - gave my mess-kit to the *dhobi* (washer-man) for ironing and got down to polishing my mess jacket buttons and Wellington boots, so that his Sahib would look every bit as smart as any other Sahib in the Mess that evening.

His Sahib was no less anxious on that count. I remember the glorious feeling when my bearer helped me slip into my blue mess jacket and I beheld in the mirror, for the first time, that shining solitary star on each shoulder that a second-lieutenant wears as his badges of rank. "Give them another go with brasso and elbowgrease" (little did I dream at the time that, one day, I would head the Company that makes Brasso!), I exhorted the bearer in the gentlest of tones, lest he should think that he was being admonished for not having those stars shining bright in the first instance.

Dinner was at eight-thirty but one didn't need to possess a watch to ensure punctuality. A Regimental bugler sounded the "first Mess call" a quarter of an hour earlier and that was sufficient warning. Many were the occasions, later, when one would hear that warning call whilst one was still in the Kasauli Club and, with the perfection that comes with practice, one would pelt down the winding footpath in pitch darkness, jump into the tin bath and out of it in a jiffy, scramble into mess dress and sprint up to the Mess - all within ten minutes. (For young officers, the Old Sergeant Major's formula "When Oi sez seven ho' clock, Oi means foive minutes to seven", held good on all occasions).

PADDY THE IRISHMAN

On that first night - of - nights, I entered the Mess ante-room at exactly twenty five minutes past eight, my feelings a mixture of self-conscious pride and nervousness. Virtually all the subalterns (lieutenants and second-lieutenants) were already there, headed by the senior subaltern, an Irishman named Paddy Wellwood.

In those days, promotion in the British Army took place only when there was a vacancy, with the result that the senior subaltern in a battalion could have as much as eighteen years service (Paddy had ten). In fact, one of the last pieces of advice we were given as cadets was that if, on entering the British battalion's Mess for the first time one found a balding gentleman sitting in the ante-room in civvies, doing the cross-word or whatever, one shouldn't automatically say "Sir" to him, as he may well be the senior subaltern! (You didn't say "Sir" to an officer senior to yourself off parade, unless he was a Major or above).

On entering, therefore, I said "Good evening". My brother - officers-to-be returned the greeting cordially and Paddy added, "What do we call you?". "I'm Chopra", I replied. "I know that" said Paddy, "but what shall we call you?". "I'm known as Raj Bir" I replied.

An Irishman to his finger tips, back came Paddy like a flash with the warm and welcome invitation, "Have a large beer, Raj Beer".

One couldn't have wished for a more delightful start to one's career.

Medium Naval Power Strategy*

VICE ADMIRAL MIHIR K. ROY (RETD) PVSM, AVSM

Rear Admiral Hill, the author of this book, who belongs to our generation of Naval Officers, has considerable experience of naval planning in view of his successive tenures in the Admiralty. He has kept himself abreast of contemporary strategic thinking and has interacted with well-known writers such as Sir James Cable, Admirals Eberle & McGeoch and Professors Nailor and Bryan Ranft who have spread the Mahanian gospel of 'Sea Power' to many of us during our sojourn at RN College, Greenwich and King's College, London. The author has put forth his views lucidly on maritime strategy for medium naval powers which encompasses Britain, France, India, Australia, Brazil, Japan and perhaps China. The book is in 3 parts: ingredients of power; tools of maritime strategy; and deployment of Naval forces. He has also sought to explain a large spectrum of maritime terminology which has been tastefully published by Croom Helm of London and Sydney.

In the first part, Admiral Hill classifies power under 3 headings: economic, human resources and military power. Thereafter he elucidates the various components of maritime power viz trade, ship building, force levels, living and non-living resources. He next proceeds to define a medium naval power as that of a country having the necessary economic, industrial technological and force levels to safeguard national interests but without the capacity to intervene unilaterally beyond their regional boundaries. Hence he states that medium powers are those who have not the global reach of the super powers and therefore lie between 'self-sufficiency' and 'insufficiency' which in today's parlance comes under the category of 'regional power'. He further amplifies that medium powers must have the ability to use the sea to benefit their economy, absorb technology and ensure security. He adds that such maritime powers will be constantly under a variety of threats at sea and by sea such as maritime boundary disputes, poaching, harassment, blockade, sabotage, hijacking, detention, island grabbing (Tumbs, Paracels and Spratly) and threats to assets at sea. Hence the author considers alliances as a key element for medium powers which perhaps echoes the ethos of NATO and WARSAW PACTS for European security.

It will therefore be of interest to examine the structure of other medium powers such as India, Argentina, Indonesia, Iran and Iraq where non-alignment

**Maritime Strategy for Medium Powers*, by Rear Admiral J.R. Hill, Published by Groom Helm Ltd, Provident House, Burrell Row, Beckenham, Kent BR31AT, 1986, Pages 247 Price: £19.95

is the alternate edifice for a third world consortium for reducing tension. India, for example, could have rapidly built up her Defence forces if she had only aligned herself to a big power by providing facilities on her 6000 Kms geostrategic coast line which dominates the Indian Ocean. But instead, naval hardware was purchased from USSR when USA and Britain refused to sell India submarines and other sophisticated equipment while gifting the same to Pakistan and Gulf countries. Hence the Soviet Union was able to leap frog India's traditional supplier - Britain almost a decade before the Indo-Soviet Treaty of Friendship & Cooperation. But later, possibly due to economic pressures, Britain concluded the sale of Sea King helicopters, Sea Eagle missiles, Sea Harrier aircraft and recently a Ski Jump equipped aircraft carrier. Similarly West Germany negotiated the sale of highly sophisticated hunter killer submarine and France continued to be a major supplier of military aircraft. The Western Press has only now grudgingly recognised India as a major regional power as will be observed from the Time Magazine of 3 April 1989.

Further, India's insistence on transfer of technology while contracting for ships and weapon systems enabled her to accelerate the development of a three dimensional Navy. The result was the brilliant exposition of sea power in 1971 irrespective of 'tilts' by external powers.

However, navies are not built by merely financial sanctions. The expansion of the US Navy after Pearl Harbour, the build up of the Soviet Navy consequent to the Cuban blockade, the resurgence of the Royal Navy following Falklands and the present balanced expansion of the Indian Navy is mainly due to the will of the people as implemented by the professionalism and dedication of her naval personnel which fortifies the cliché, that it is the 'man behind the metal' that will remain the prime ingredient for military credibility. The Yom Kippur War, Vietnam, Iran-Iraq conflict and Falkland operations are some case studies which merit analysis in order to understand the combat effectiveness of armed forces - be they super powers or lesser powers!

In Part II of the book, the author surveys the ingredients of naval warfare equipment, operations, force levels and deployment pertaining to medium powers. The chapter on the management of power by a multiplicity of factors involving material, training, organisation, intelligence, surveillance, constabulary duties, disaster control and sea presence both in the sea control and sea denial roles is of particular interest. The succeeding chapters on 'low intensity' and 'high level operations' should likewise be studied against the backdrop of the Indian Navy blockading and attacking highly defended ports during the Indo-Pak conflict and later by their response to the intervention-by-invitation from the Indian Ocean islands of Seycheles, Mauritius, Sri Lanka and Maldives.

Therefore Admiral Hill's prescription for the role of medium naval powers is perhaps not wholly applicable to the littorals in the Indian ocean, as this embayed stretch of salt water lies a great distance away from the naval bases of the Big Powers which are mostly located in the Pacific and Atlantic sea coasts. Hence India has the inherent advantage of greatly reduced arcs of operations in the Indian Ocean which gives her almost a 3:1 advantage in both time and space. Besides, external powers who have perforce to operate their forces far away from their home ports have also to sustain them with fuel, ammunition, victuals and spare parts not to mention rest and relaxation for the crew in order to resort even to 'gun-boat' diplomacy in a tropical and vastly different environment which has already taken a heavy toll, both psychologically and physiologically, of the sailors from more temperate climates. Further, the littoral naval forces will be battling on their own home pitch and for a cause which is more visible. Hence the morale of their fighting forces will be comparatively higher and therefore capable of greater sacrifices than their affluent adversaries. Further these regional navies will have the advantage of sustained aerial recce and early warning from their home air bases.

The author's recommendation in Part III that medium naval power should concentrate on constabulary and low intensity operations are perhaps too naive for newly liberated countries who have been subjugated by these Atlantic powers for over a hundred years! A country's navy must necessarily be tailored to meet the needs of her national security as also to implement the country's aims and aspirations as maritime forces are but a tool of the nation in the same way as a hammer is a tool to the carpenter. Admiral Hill's very readable book on maritime strategy for medium powers merits a place in all libraries even though the sermon is from a Western oriented pulpit as it is perhaps difficult for erstwhile colonial powers to understand the strong emotions of liberated nations in this ocean area, particularly in view of Admiral Mahan's prophetic statement: 'In the 20th century the destiny of this world will be decided in the Indian Ocean'.

Unconventional Warfare*

MAJ GENERAL SC SINHA, PVSM (RETD)

Secret Armies is a well researched story of the special forces maintained by various countries in the West and of Soviet Russia for the purpose of waging what the Americans term as low intensity conflict and also known as unconventional warfare. In a note prefacing the book, the author states that to some extent the title of this book is a misnomer as the existence of the forces mentioned in the book has been openly acknowledged by governments and, on occasion, by the groups themselves. On going through the book the reader will find that it is much more than the mere tale of these so-called Secret Forces. The author has included in this book not only the actions of some of these special forces but has covered in detail the Irangate scandal, the events of which we have yet to hear the last.

In his coverage of special operations the author has quite correctly included the whole gambit of unconventional warfare starting with the placement of special forces deep behind enemy lines for reconnaissance, sabotage and other intelligence related tasks at one end of the scale, to quick intervention in terrorist situations to free hostages, psychological operations and safeguarding VIP at the other end. Of these operations in recent years the successful intervention to free hostages from hijacked aircraft, as at Entebbe and Mogadishu, have been the most spectacular and have drawn world-wide admiration if not acclaim. This has led to a scramble by many countries to form special forces to meet the increasing threat from terrorist groups.

The author has cogently argued that since conventional wars between nuclear powers are likely to soon escalate into a nuclear holocaust, it seems to be the least likely eventuality. Therefore, what the Americans term as "low intensity conflict" - whether guerrilla warfare, counter-insurgency or terrorism - is here to stay and is likely to occur all the more often in future. From this, the author makes out a case for an increase in the numbers and size of special forces. In the USA, we are given to believe that, this apparently is being strongly resisted by the military while the civilian authorities from Congress to the Department of Defence are keen to the extent of creating the special forces as a fifth service, a course with which Mr Adams is much enamoured. To his way of thinking the US military high command are a bunch of incompetents, who cannot see beyond

*SECRET ARMIES: The Full Stories of SAS, Delta Force and Spetsnaz by James Adams, Published by Hutchinson, an imprint of Century Hutchinson Ltd. Brookmount House, 62-65 Chandos Place, London, WC2N4NW, 1987, Pages 440, Price £14.95

the requirements of better, bigger and more expensive tanks, aircraft or fighting ships, and the special forces must, therefore, be freed from their clutches if they are at all to come into their own.

It has been truly said that, in common with the oldest profession in the World, in the profession of arms it is the amateur who claims to be the better performer than the professional. Mr Adams has not given the arguments the military have against the proliferation of special forces apart from stating the love the generals and admirals have for more sophisticated tanks, aircraft and warships. The other factor which he feels militates against the special forces is that no officer with any ambition wishes to stay for very long with such forces and returns to the mainstream in the interest of his military career. This, he feels, is detrimental to continuity and the building up of doctrine for the special forces. His solution is for officers with the special forces to be given avenues of promotion to the highest echelons of the military hierarchy so that they continue to serve with such forces.

The problem of the special forces is that for its tasks, such as the freeing of hostages in hijacked aircraft, the requirement is for men and officers of a very high calibre and physical fitness. In any Army, men and leaders of such high calibre are in great demand for a variety of competing jobs but are, unfortunately, in critical short supply. Therefore, to be of a really high standard, such forces have to be limited to the minimum that is required for the tasks to be performed. There can be no room for empire building, which is again a popular game in all services, as that can only lead to a self-defeating devaluation and dilution of the standards required. Further, most tasks, which require a high degree of competent performance actually need very small numbers. Tasks which require larger numbers can be performed by selected military units after a fairly short period of orientation and special training.

Most special operations are small unit operations. Leaders excelling in such operations will not necessarily have the qualities that are required to fill higher command appointments in the services. But persons who reach higher appointments in the Armies of most countries will normally have the vision, foresight and competence to know the correct employment and requirements of all types of forces, be they regular troops or special forces. There must be something grossly wrong in the selection system of the country in which people reaching higher command appointments do not possess these capabilities. Further, the requirement of extremely high standards of physical fitness dictate that special forces are manned by young officers and men. In such forces continuity of doctrine is maintained by the system and not necessarily by individuals as long as the turn-over is kept within viable limits and persons allowed to return for

repeat tenures. In this the SAS seem to have achieved very satisfactory working and organisational systems, which could certainly be models for other special forces.

The book describes a number of interesting operations in which special forces were used. The story of the famous Israeli Unit 269's rescue operations at Entebbe, the GSF 9 operation at Mogadishu and the SAS's operation to clear the Iranian Embassy building in London are spectacular success stories, which have been well covered. Equally interesting are the not so successful operations of the American Delta Force in its unsuccessful attempt to rescue the American hostages from the US Embassy in Tehran, the rescue operations mounted by Pakistan to rescue hostages from the PANAM aircraft at Karachi airport and the Egyptian bungled rescue operation at the huge airport in Malta. But few military foul ups can compare with the US invasion of Grenada. It is unbelievable that such a mess could be made by the military forces of a super-power. The story reads more like the hilarious antics of the forces of a Banana republic, which had suddenly come into tremendous military resources and choose to demonstrate its newly gained power on one of its smaller neighbours. It almost justifies Mr Adam's lack of respect for the US military hierarchy.

This is a well researched book which combines a good grasp of military technology written mainly in lucid and readable language. The many anecdotes keep interest alive even when the going gets a bit heavy. The appendix gives interesting details of the organisations of many countries. Unfortunately, the author did not think the organisations of some of the larger Asian countries deserving of mention as compared to those of even the European light weights like Belgium and Denmark. This is another good authoritative work for those interested in the serious study of special forces and their operations. Of particular interest to such students will be the details of the less well known Soviet special forces, the Spetsnaz. Adams gives an excellent account of the role played by the Spetsnaz during the USSR's invasion of Czechoslovakia, when they, with the help and support of agents in place, walked straight into Mr Dubeck's cabinet meeting and arrested the whole of the Czech leadership.

They again seemed to have played a similar important role in assisting the entry of Soviet forces into Afghanistan.

BOOK REVIEWS

International Security Year Book 1984-85

by Barry M Blechman & Edward N Luttwak

Published by Westview Press, INC., 5500, Central Avenue, Boulder, Colorado 80301 USA. 1985, Pages 260, Price Not Mentioned.

International Security Yearbook - 1984-85 is the second of the series published by the Centre for Strategic and International Studies. The Yearbook's opening chapter provides a brief but comprehensive survey of the year's major events having a bearing on global security. This is followed by chapters on East-West Military Balance, NATO, Eastern Europe, Middle East, South West Asia, East Asia, Latin America and Africa, written by well known scholars.

From USA's point of view, maintenance of East-West military balance constitutes the hard core of national security policy. The world 'balance', however, does not necessarily mean equality or parity with a rival power but a relationship such that, overall, USA would retain a comfortable lead. William Durch and Peter Almquist's paper on 'East-West Military Balance' constitutes the key note Paper in this Yearbook.

The authors having analysed the build up of nuclear weapons by the two super powers over the years have come up with projections concerning the effects of a first strike by each power on the nuclear weapon sites and carrier vehicles of the other. The projections are based on mathematical modelling carried out by Peter Almquist and Stephen M. Meyer for US Department of Defence Advanced Research Project Agency (DARPA).

Till the mid Sixties, USA enjoyed overwhelming nuclear superiority. It could have almost eliminated Soviet nuclear arsenal by a preemptive first strike. Had the Soviets at that time resorted to a first strike, the residual US arsenal would have been powerful enough to destroy Soviet arsenals in a retaliatory strike. By 1975 the situation had changed somewhat but USA still retained its supremacy. It was towards the end of the Seventies and early Eighties that Soviet nuclear strength and with that its bargaining power grew. Even so it could not draw level with the USA. However as the size of the Soviet arsenal increased there was the possibility of a progressively larger number of Soviet missiles surviving a first strike by US forces. Some of these surviving missiles could be used by Soviets to hit soft targets such as population and industrial centres in USA causing the latter unacceptable damage. This consideration effectively discouraged USA from exercising the pre-emptive strike option.

USA's strategy of commissioning mobile ICBMs (the Midgetman), developing space based defence, utilisation of lasers for interception of incoming missiles and many other aspects of US strategic defence have all been discussed adequately.

Students of national security affairs will find this Yearbook very useful.

-- Col R. Rama Rao (Retd.)

American Sea Power & Global Strategy

by Robert J. Hanks

Published By: Pergamon-Brassey's International Publishers in Co-operation with the Institute For Foreign Policy Analysis, Inc.; 1340 Old Chain Bridge Road, Mclean, Virginia 22101, USA, 1985, Pages 97, Price \$9.95/£7.15

This is an interesting and thought provoking book. Though small in size, it has full facts and figures giving the readers an insight into the American Sea Power and the strategy. The book analyses the strength and strategies of the two super powers with a passing reference to china. The strength and strategies of the navies of the other world powers have not been discussed. Their inclusion would have been useful.

The author has analysed various issues in a chronological order starting with threats, the strengths of two super powers, their comparison and finally the super power of the future. How right is the author that the United States perforce has to have a navy which is designed to ensure free use of high roads of maritime commerce and overseas military communication while the USSR Navy is built with the aim of denying the use of the seas to the West and the USA in particular.

Regarding the threat, although both the Super Powers consider each other a threat, the recent meetings between the two Presidents and President Mikhail Gorbachev announcing his decision at the UN General Assembly to effect unilateral reduction in troops and armament in Europe and on the Asian Front has to some extent changed the threat complexion.

The two chapters dealing with the strength of both the navies, their weaknesses and the future plans make an interesting reading. However, the Sea Power today includes a viable merchant navy, an efficient oceanographic fleet, a suitable Coast Guard and a strong industrial base. Perhaps a comparison of the two merchant navies, the coast guards and the capabilities of the shipyards would have made the book more complete.

The statement made by the author in chapter 10 (page 89) that taking all factors into consideration, the US Navy is still superior to the USSR Navy is debatable. Considering the 1984 figures, except for the carrier force (USA 13 and USSR 5), the USSR outnumbers the USA in every type of ship particularly the Attack Submarines (USA 99 and USSR 276). With Kiev class Aircraft Carriers, Kashin Class destroyers, fourth generation of nuclear powered submarines (Typhoon Class) in operation and the 60,000 - 70,000 tonne nuclear powered Aircraft Carrier under construction, the capability of the USSR Navy cannot be under estimated. It is relevant to mention that the author himself in Chapter 10 (Page 85) has stated that the navy which the USSR has fashioned is superior to that of the United States and the trends suggest that this will continue to obtain despite the current U.S. built up.

On the whole a very educative and interesting book which should be read by all naval officers particularly the senior ones responsible for shaping the maritime strategy of a nation. Also, the book will be of interest to scholars engaged in research connected with maritime matters. A must for all libraries ashore and afloat.

-- Captain R P Khanna, AVSM, IN (Retd)

The Defense Game: An Insider Explores the Astonishing Realities of America's Defense Establishment

by Richard A Stubbing with Richard A Mendel

Published by Harper & Row, Pub. INC., 10 East, 53rd Street, New York, NY 10022; 1986, Pages 445, Price: \$21.50

Defence budgeting is high finance and for a country like the USA, with the escalations and costs of new technology it soars into super-high. It is also shrouded in multiple veils of secrecy and mystery - former about its structural inputs and the latter about the perceptions, whims and pressures of it.

After a decade of neglect "when the defence budget of USA remained below \$ 150 billion level - 1965-75, maintaining a favourable balance in military capability, under Presidents Carter and Reagan, it took off on an unrestrained upward sweep showing total real growth of 329.5 billion dollars by 1985". 'Carter Doctrine' of ensuring pre-dominance over the Persian Gulf started the race for acquiring air- and sea- lift capability, while Reagan's thrust centred around a crash modernisation programme and the Strategic Defence Initiative. Both thrusts and then diverse inputs are surrounded by controversy.

Notwithstanding the strategic perceptions and adopted policy of the leadership, the entire process of defence programming is beset with tussles and

conflicts between various agencies-strategic intelligence organisations, the Armed Services the Defence industry, the Administration and the Congress. Richard Stubbing who worked on the Defence budget from 1962 to 1981 gives us a deep insight into the unseen factors behind Defence Finance Management during 1980-1985, and why the East gets more bang for the buck.

In their book- 'The Defense Game' which may well have been called "the games the Defence planners Play", the authors have boldly analysed the pattern of defence expenditure during the decade after 1975, and chartered the Budgeting as well as contract Awarding Processes, within the Pentagon and its executive limbs, - often letting the cat out of the bag. A review of the performance of five secretaries of Defence from Robert Macnamara to Casper Weinberger with their special expertises, style and perceptions is the culminating theme of the book. They conclude that, for an effective Secretary for Defence, three characteristics are most critical:

- prior experience in defence,
- a collegial rather than autocratic working style,
- experience in dealing with Congress and the press.

The book describes the working of the Military - Industrial Complex (MIC) in the USA and its influences on defence spending with deep insight.

-- Maj Gen S K Talwar

A Fortunate Soldier

by Ken Perkins

Published by Brassey's Defence Publishers Ltd, 24 Grey's Inn Road, London WCLX 8HR (UK) 1988, Pages 198, Price £ 15.95

This is truly a soldier's story. By dint of his own merits and talents Ken Perkins did his duty with conspicuous success and gallantry and rose from the ranks to hold a number of important positions.

In February, 1944, aged seventeen and half, he enlisted at the recruiting office and was selected by the War Office Selection Board and reported on 10 October to the Depot of Northamptonshire Regiment for kitting.

On commissioning he volunteered to be posted to the Middle East, 7 Field Regiment RA situated on Bitter Lake. In 1947 the Regiment moved to TRIPO-LITANIA and became the 73rd Heavy anti-aircraft - Regiment. In September 1947, he went home and got engaged to Anne Dairy. By 1949 regimental life

abroad had settled down largely on a pre-war pattern with lunch at half past one followed by a siesta and then, mid afternoon sport. In September 1949 he married Anne.

He reported for training as a pilot in Jan '52 and on gaining his wings was sent to Korea, when the war started in 1950 with North Korea invading the South. After the war he was posted to Malaya in Oct '53 and was awarded the DFC. Then after attending staff college at Quetta he was posted to the 3rd Regt Royal Horse.

In 1961, Ken Perkins was posted as Brigade Major to the Malta Artillery Brigade. After attending a six months course at the Joint Services Staff College at Latimer in 1962 and after Regimental duty with 1st Regiment Royal Horse Artillery, he was posted as Instructor to Staff College Camberley in 1965.

After Commanding a regiment and a Brigade between 1967-71, and a stint on a desk job as the Director of Defence Operations at White Hall, Ken Perkins, now a General Officer, was selected to command the Sultan of Oman Armed Forces in 1975. In this appointment he succeeded in neutralising all rebel activities in Oman.

On 1 April 1982, he retired from the service and joined British Aerospace in their Dynamics division. In 1984, the strains of Military life led to divorce with Anne ending thirty-four years of marriage. His forays into industry did not produce unqualified satisfaction but brought unqualified joy. He met Celia Sandys in April and married her in July 1985.

Truly a varied, stimulating and colourful career well described.

-- Maj Gen B D Kale

Soviet Ground Forces: An operational Assessment
by John Erickson and others

Published by Westview Press, INC, 5500 Central Avenue, Boulder, Colorado 80301, 1986, Pages 267. Price not mentioned

The publishers claim that this is the first comprehensive treatment of the Soviet Ground Forces, the "Central element of the modern Soviet Military Structure". We may question "first", but the book certainly exudes highly professional and expert treatment of this complex subject. The detailed list of contents and precise wording, make it very readable. Soviet terms with definitions and glossary are clearly explained. Comment is well supported by recorded

fact and logical analysis. The pedigree of the authors explains their demonstrated expertise in acquisition, analysis and presentation of this special knowledge and the book has a quality of authentic and impartial assessment which makes it a "must" for all interested in such military and political studies. One hopes we get more from the same team and others of equal quality.

The book has chapters on historical Evolution, Operational Procedures, Norms (Soviet style), the Air Component and finally an Assessment; introductory and concluding remarks, notes, a glossary and a bibliography are added. Altogether these present with skill and military/political understanding Soviet strategic and tactical doctrines, and the way these affect thought and action from the highest to the lowest levels. This is more than a studious record of facts and mechanical assessment of overall capability.

The Soviets have developed "closest to the combined arms outlook than any other country". Success is achieved only when there is "precise coordination of all branches". The ground forces are only one of five military components, the others being Navy, Air Force, Air Defence and strategic missiles. All are self-contained but yet have an integrated approach to overall defence objectives. The combined arms belief pervades, cutting across these organisations where necessary. The political doctrines of these military forces are not discussed in the book, but with the well established and powerful political network ingrained into and part of the military organisation, one can understand how the Soviets have developed a military potential of immense magnitude.

The doctrines of "deep thrust" and "daring action" demand flexibility and initiative in those who order and those who execute. Highly centralised controls, rigid systems seem to counter this to a degree where one wonders how the system can work. Repeatedly mentioned is the dramatic improvements in quality and capability of Soviet equipment, described by the authors as "superb". Not mentioned, but well known, is the Communist "Religion" and love of motherland, which overcome the obvious handicaps of over-centralisation and bureaucratic inertia. The material and morale resources are there for the taking by potential Heroes of the Soviet Union.

There is considerable detail and analysis of doctrine to show how the Soviets have learnt from past combat and continuing exercises, Mobility, fire power, shock action have been enhanced by electronics, automated troop control, helicopters, rockets, missiles and, above all, offensive thinking. Protection for deep offensive action, carried out in echelons, is gained by speed and combined arms. The mobile infantry man has come back to his pivotal role of capturing and holding enemy ground, albeit with artillery and even possible aid

to fire power and movement integrated at the lowest operating levels. The Soviet ground forces are justifiably described as "the most powerful and dynamic in the world". Under conditions of conventional warfare, the authors assess them as more than a match for NATO/US forces deployed against them.

Under conditions of nuclear war similar assessment is not possible without detailed analysis of how nuclear weapons will be used by opposing sides. However, in a scenario of tactical use only, mobility, shock action and being deep into enemy territory, with close contact, may be preferred to conventional deployment with a clearly identifiable lines of contact. The matter has been left undiscussed, which is wise since the uncertainties of nuclear warfare are such that assessments tend towards speculation.

Altogether, this is a book worth study by serious students of war. And hopefully, we may soon see an assessment of the Soviet Ground Forces based on their performance in Afghanistan, where they fought, and are still involved, in a different kind of modern war.

-- "Tindi"

Sino-Soviet Relations: Re-examining the Prospects for Normalization

by Thoms G. Hart

Published By Gower Publishing Co. Ltd., Gower House, Croft Rd, Aldershot, Hants GU11 3HR (UK), 1987, Pages, 128, Price not mentioned.

This brief study made by the Swedish Institute of International Affairs outlines the historical evolution of the Sino-Soviet conflict in an interesting manner. The additional merit of the study lies in the use of innovative technique of 'issue resolution approach' in the analysis of the problem.

The report briefly traces the evolution of the Sino-Soviet conflict during the period of past 30 years. Each issue has then been examined in detail, bringing out the outcome of the conflict, also highlighting the residual problems which have continued to exist. These unresolved irritants in their mutual relationship have been deliberated at length bringing out the relative points of view of the two adversaries. At the end, an effort has also been made to make a futuristic assessment of these pending issues. However, the possible directions towards which these problems may head for a solution, if at all there is one, has been accorded somewhat sketchy thought which is totally hypothetical in nature.

On the whole, a very concise but comprehensive presentation of the long drawn Sino-Soviet conflict which is worth reading.

-- Brig M M Walia

Diplomacy and Intelligence During the Second World War: Essays in honour of H.N. Hinsley

by Richard Langhorne

Published by Cambridge University Press, Pitt Building, Trumpington Street, Cambridge CB2 1RP (UK), 1985, Pages 329. Price not Given.

This book is a collection of specially commissioned essays on strategy, diplomacy and intelligence, with a special emphasis on intelligence, during the Second World War, as a tribute to Professor F.H. Hinsley a foremost historian of British war time intelligence.

Hinsley was Vice Chancellor, Cambridge University from 1981-83 and in 1985 was Master of St. Johns College, Cambridge. The editor, Richard Langhorne was in 1985 a fellow of St. John's College, Cambridge himself and a great admirer of Hinsley. The contributors of the essays are distinguished professors of history at various universities of England, Australia and Israel and many were Hinsley's students.

The book is divided into four parts. Part I is principally concerned with Hinsley himself. Part II includes widely differing aspects of pre-second World War international politics. Part III deals with aspects of the way Churchill and the war cabinet handled the earlier stages of the War, and the vexed question of Palestine (a case of misinterpreted military intelligence); the presence in Britain of the last Prime Minister of Spain a presence which jeopardised Franco's neutrality; the efforts (not successful) of Churchill trying to get the USA to enter the war after the defeat of France; the quandry of what to do with King Peter of Yugoslavia in the face of the rising success of Tito; and the questionable doctrine of unconditional surrender - Part IV is confined to the Nuremberg Trial in particular relation to Germany's occupation of Norway when viewed from the fact that Britain itself was planning to do just the same and was forestalled by Germany by just two days, not as a result of superior German intelligence about British plans but just that both were planning to do the same thing and Germany did it first

A Collection of very interesting essays indeed which are primarily based on material available now. A well researched book, which adds to documentary evidence on the Second World War's strategy, diplomacy and intelligence.

— Maj General R L Chopra, PVSM (Retd)

Intelligence Chief Extraordinary: The Life of the Ninth Duke of Portland
by Patrick Howarth

*Published by The Bodley Head Ltd., 30 Bedford Square, London WC1B, 3 RP, 1986
Pages 256, Price £ 15.00*

This is an excellent biography by Patrick Howarth, who was the Press Attache to William Bentinck in Warsaw, when they were sent together to Poland at the end of World War II. It not only describes the political and economic background to William Bentinck's life and career, but does so clearly and vividly, with Bentinck's own unforgettable descriptions of the eminent people with whom he worked as a young diplomat. What emerges is the portrait of a very modern man, a visionary, ahead of his time, with much foresight. When selected to chair the Joint Intelligence Committee in 1940, soon after the outbreak of World War II, he found himself faced with the Service Intelligence Directorates of Army, Navy and Air Force, each wary of the other, a lack of coordination between the Ministry of Defence and The Foreign Office prevailed, and the Three Service Chiefs, who were certainly cool towards a civilian, whose job it was to collate and coordinate the information needed for all strategic planning! The lamentable state of preparation for Second World War in Britain, and the lack of cohesive intelligence for War was understood by Churchill, who came to power in 1940 at the head of a Coalition government. After the failure of Neville Chamberlain to negotiate a peace settlement, war became inevitable and Churchill realized the importance of an efficient Intelligence body and issued a directive that the initiative of collecting relevant material and presenting it, was to lie with a Joint Intelligence body and not with individual directorates. It was a formidable task to persuade the various factions to work together. Bentinck was supported and encouraged by General Ismay, P.S.O. to Churchill, as he was able to "interpret strong men to each other without usurping the authority of any".

That Bentinck succeeded - was evident in the second half of the War, the J.I.C. as a body was no longer ignored, but restructured and was able to give concise and accurate information to the War Cabinet, thus proved his ability at organisation and working with other people. Churchill may have had second thoughts about giving initiative to this committee as they finally vetoed one of his plans after three sessions of the J.I.C., as they thought that his strategy in that particular case was unsound. Churchill finally abided by their advice. It was this kind of joint planning which saved Britain from defeat. Despite a highly professional army, the Germans were let down by their own Intelligence. The unhealthy mutual suspicion and distrust between the Nazi party and German army, caused avoidable apprehensions, uncertainties and delays.

It was under Bentinck's guidance that the committee functioned as it should, working alongside other farsighted people, each free to express views, he welded the J.I.C. into the kind of human computer needed to pass on balanced and processed information to those, who planned the major operations of the War. That Bentinck was dismissed from the Foreign Service after the war over his personal divorce proceedings, without due acknowledgement for all that he

achieved, prompted Patrick Howarth to trace his life in great detail, leaving us humbly aware of the high calibre of integrity, professionalism and intelligence needed to cope with such a job. That he left politics with dignity and courage, and contributed to the restructuring and growth of industry without rancour or bitterness, points to other qualities needed as a leader - those of humanity, and courteousness, combined with a sceptical sense of humour.

This is a book to be read on several counts, as a study of the events of the major part of the twentieth century, a view of the functioning of the Foreign Service and the Three Services, or as a study of the people who were part of such major decisions relating to cause and after-effects of two major wars. Any officer studying leadership, military history or to be posted as a Defence attache' would gain a great deal from this biography of a great individual.

-- Brig S K Issar, VSM

Rogue Warrior of the SAS, Lt Col 'Paddy' Blair Mayne, DSO (3 Bars), Croix De Guerre, Legion D'Honneur

by Bradford and Martin Dillon

Published by John Murray (Publishers) Ltd., 50 Albemarle Street, London W1X 4 BD, 1987, Pages 256, Price £ 12.45.

The origin of the Special Air Service (SAS), now an elite component of the British Army, is interesting. David Stirling, a young Scots Guards subaltern, who had been in 8 Commando had come to Suez in 1941, with Lay Force. This was a group of Commandos, under the command of Brigadier Robert Laycock, who were used in large scale sea-borne raids on enemy centres on the North African coast. Since these were unsuccessful, because they lacked the essential element of surprise, David Stirling began experimenting with parachute jumps, to create a special service unit to perform the Commando role. His ideas were presented in person to the Commander-in-Chief in the Middle East - General Sir Claude Auchinleck - who accepted them with alacrity. Plans were prepared to attack the German airfields at Tamimi and Gazala, the night before a major offensive by Eighth Army was to begin in November 1941. Stirling's force would be known as 'L' Detachment, Special Air Service. Auchinleck explained that the Special Air Service was non-existent. It was merely a name given to a bogus formation of dummy gliders and installations, meant to deceive the enemy into thinking that British paratroops had arrived to reinforce Eighth Army. The designation was a classic piece of what would now be called dis-information.

Thus was born a force of volunteers, tough and eager for unconventional battle, whose contribution to the victory of Allied armies in North Africa, Sicily, Italy and North West Europe was of unquestioned value. Public acknowledge-

ment of their valour came from senior Allied Commanders - Generals Auchinleck, Alexander, Montgomery, Dempsey and Eisenhower. This biography of Colonel 'Paddy' Mayne, Commander of a SAS unit, tells the story not only of this unique person, but also the kind of fighting in which the SAS was involved. 'Paddy' Mayne was Irish, physically exceptionally strong, a man virtually without fear, an introvert who could be aroused to violent anger; an addict to alcohol under whose influence he could become unbalanced enough to strike two of his Commanding Officers - both distinguished soldiers, and a brigade commander - Brigadier Michael Calvert, of Chindit fame. It says a great deal for the tolerance of the British Army establishment - perhaps in recognition of his unique qualities of leadership - that his offences against military discipline were condoned. The description of the raids conducted by the SAS are vivid and personalised; recounted as they have been to the authors by surviving compatriots of Colonel Mayne. To the young officer of today, they will provide him with all the excitement and adventure of battle, which he seeks in his military reading. "Paddy" Mayne survived the war unscathed, he was awarded the Distinguished Service Order four times, a tribute to the legendary heroism, and it is tragic that he should have died in a peacetime car accident.

The authors have done prodigious research in compiling this biography. They have interviewed officers and men who served with Colonel Mayne and who had ample opportunity to observe this many faceted personality; members of his family who spoke of his childhood and post-war years and who generously made available his correspondence; and consulted official records of the SAS as well as contemporary accounts of participants in this unconventional warfare. The result is a gripping story of unbelievable courage. Winston Churchill described Colonel David Stirling (who, in his own words, was a co-founder of the Regiment), to Field Marshal Smuts as "the mildest mannered man that ever scuttled ship or cut a throat". The authors say that this "Byron quotation from Don Juan, could equally well have been applied to Paddy Mayne - when sober". Such is the stuff of which heroes are made.

-- Lt Gen M L Thapan PVSM (Retd)

From OSS to Green Berets: The Birth of Special Forces

by Col. Aaron Bank, U.S.A. (Retd)

Published by Presidio Press, 31 Pamaron Way, Novato, CA 94947 (USA), 1986, Pages 216, Price \$16.95

Though the last declared total war ended in the year 1945, an undeclared one has gone on, even since waged with bitter intensity and utter ruthlessness between the two super power blocks. One of the instruments in the unacknowledged war is the Special Forces of the US Army, known popularly as the Green

Berets, which inadvertently has been borrowed from the British Commandos, affords the commendable advantage of maximum economy of force, for a miniscule team is designed to instigate, organise, equip, train, plan for, coordinate, direct and supply very large indigenous renegade forces in what are called, in American terminology, target countries. Besides economy of force, these teams provide the very desirable benefit of plausible deniability, an attribute they share, amongst others, with the CIA.

Unlike the CIA, whose activities are, all, surreptitious, some of the Green Berets exploits have been given considerable media publicity in the USA, for instance those in the peripheral regions of Vietnam especially with the montagnards in Laos. They also came in for mention in one of the latest American feat of arms, that is the successful invasion of Grenada. Presumably they have acted elsewhere and are active even today, though where, can only be a matter for conjecture.

The author, an ex-member of one of the Jedburgh teams of the OSS was responsible, in part, for steering the case for the establishment of the force and subsequently raised and trained it at the headquarters shared by it with its sister organisation, the Department of Psychological Warfare at Fort Bragg. Given his background one had hoped for a more thorough coverage including some of the operational activities of the incidents that have already been exposed by the press. However the book does give an insight to American thinking of the Army's role in clandestine operations.

-- Col R R Chatterji

The Perfect War: Techno War in Vietnam

by James William Gibson

Published by the Atlantic Monthly Press, Boston, 1986, Pages 523, Price \$14.95.

American involvement in Vietnam has been described as a struggle between victims and as a tragedy of epic dimensions. The 1960s and 70s witnessed a flood of memoirs, commentaries and novels, mostly topical and generally lacking in any analysis of reasons for failure. Gibson's book, 'The Perfect War' is the first one which examines the war from a fresh perspective: the inefficacy of technowar against the strategies, military and political, employed by the revolutionaries. Gibson evaluates the claims of both the liberals and the conservatives; the former's claim that the war was the result of 'mistakes' by leaders and the latter's stand that the US lost the war because of 'self imposed restraints'. Gibson explodes both these myths.

US involvement was a natural spin off from the post World War II, Western view on the threat of communist expansionism as a 'ruthless conspiracy that relies on infiltration, subversion and intimidation', which in turn led to various theories for the South East Asian region. The 'Domino' theory postulated that the countries of the region were like dominoes; if the first one is knocked down, the rest would follow, and Vietnam was on the verge of being knocked down. The 'Popping Cock' theory as postulated by Nixon would have it that Vietnam was 'a sort of cork in the bottle, the bottle being the great area which included Indonesia, Burma, Thailand and all the surrounding areas.

France's post war commitment in Vietnam gradually drew in US assistance; later, it led to the latter's active involvement. Indeed, in 1945, even before the French could send in troops to secure her erstwhile colony, the US had already equipped a British Expeditionary Force to re-occupy Vietnam. By 1950, the USA was meeting over 80 per cent of France's cost and in 1960, President Kennedy increased the US advisers military presence from a few hundreds to a few thousands. The US combat divisions started arriving in 1965 and by 1969 the American combat strength in Vietnam stood at 550,000 excluding another 100 to 200,000 air and logistics supply personnel located outside Vietnam.

The conservatives' claim of 'self imposed restraint' is struck down as effectively as that of the liberals. Between 1965 and '73 alone, the US dropped over 8 million tons of explosives - the equivalent of 640 Hiroshima-like atomic bombs. Gibson also brings out how frustrations caused by an elusive enemy generated the most bestial form of cruelty; whole villages were burnt down and anybody found running, be it women or children were mercilessly mowed down. Troops squabbled over dismembered enemy dead bodies to procure evidence for 'body count'.

Gibson quotes Henry Kissinger in asserting that from 1945, US foreign policy was based on the belief that 'technology plus managerial skills' gave the USA the ability to reshape the international system and to bring domestic transformation in 'emerging countries'. Power was measured purely in technical terms and since the USA possessed immense economic-managerial potential, she held a highly privileged position of knowledge: the USA knew more about 'reality' itself; the underdeveloped countries lived in their own delusions. Gibson asserts that the Americans ran the war 'like an industrial venture - as a high technology, capital intensive production process'. The debits were costs of military hardware and munitions and the credits, the sheer number of enemy dead. The leaders of the American military-industrial complex existed in a closed world, believing in their own fictions, totally ignoring the lessons of the French debacle at Dien Bien Phu.

Gibson holds a doctorate from Yale University and has been the recipient of fellowships and grants from Yale University, the Institute of Policy Studies, the NIMH and the National Science Foundation. He has taught at the Yale University and at the University of California at Los Angeles and Irvine.

Altogether an interesting and well researched book which will be of immense use for researchers and scholars.

-- Lt Gen P E Menon PVSM, (Retd)

The Arab Military Option
by General Saad El-Shazly

Published by American Mideast Publishing, 3315, Sacramento Street, Suite 511, SAN FRANCISCO, California 94115, 1986, Pages 329, Price not given.

This is perhaps the first book published in the U.S.A. which presents a comprehensive Arab point of view of the Palestinian problem. Gen Saad-El-Shazly, a well known soldier-scholar, examines and compares the overall Arab-Israeli potential from a historic, political and military point of view and in this well reasoned analysis he comes to the conclusion that Arab military option is not only viable but essential. He is quite categorical when he says, "That Israel will never return the arab lands on a golden platter. What was taken by force can be recovered only by force."

In the initial chapters the book mainly deals with the history and ethos of Israel, its Armed Forces, and Defence Industry including its Nuclear Bomb. At the end, there is a comment on the Israel weaknesses and here Gen Shazly compares Israel to a giant robot-"Looming over its surroundings, crushing all in its path, outwardly invincible, but inside hollow, its action and even its survival wholly dependent on the influence and commands of others."

A section of the book has been devoted to Super Powers and their role in the Arab-Israeli conflict. The interest of USA in sustaining Israel as a front line state and strategic base in West Asia has been analysed extremely well. The Soviet interest to exert maximum influence with the intention to maintain balance of power has been considered in adequate detail but falls short of a full examination.

A point made on the likely priority of the USA in case of a simultaneous requirements of force in Europe and Israel is perhaps meant to convey to Israel that defence of Israel may not remain priority one for USA, in certain circumstances.

A detailed appraisal of the military potential, economic resources and the political postures adopted by various Arab countries round up the overall examination. Some of the main conclusions drawn by Gen Shazly can be summarised as under:-

- (a) Unless the human rights of Arab people are respected in the Arab States, the people will never be motivated to defeat Israel no matter how sophisticated the weaponry put in their hands.
- (b) The military option offers the only realistic chance the Arabs have of recovering their lost lands.
- (c) The Arabs possess all the elements necessary for victory over Israel. The future is on their side.

The possibility of current developments beginning with 'INTIFADAH', the strategy of mass civil disobedience, the proclamation of a Palestinian state and the opening of dialogue between the USA and PLO was of course not visualised in the book. These developments add new dimensions to the solution of the problem and the military option advocated by Gen Shazly will have to be viewed in this light.

-- Maj Gen Afsir Karim AVSM

The United States and Ballistic Missile Defence: ABM and SDI

by Stuart Croft

Published by the Council for Arms Control, at King's College, London, Manresa Road, Chelsea, London SW3-6LX, 1987, Pages 22, Price £2.50

States sign treaties in their interests, but political and technological circumstances supporting an agreement may change over time affecting those interests. Underlying tensions may surface to challenge the integrity of an agreement. This is precisely the case with the ABM Treaty which is very much alive but likewise under pressure after sixteen years.

Ballistic Missile Defence or an active missile defence to intercept an ICBM warhead, which gained importance during the 1960s, was seen as a great contributory factor to the U.S. and allied security and freedom in the late 1970s. A debate on the future of ABM Treaty was sparked off on March 23, 1983, when President Reagan announced the SDI programme which envisages Astrodome defence banned under Article I of the ABM Treaty - not to deploy ABM Systems for the defence of a territory.

STUART CROFT, a doctoral student in the Department of Politics, University of Southampton, examines the issue of Ballistic missile defence under ABM debate and current SDI controversy in his paper. ABM debate which mainly centered around Sentinel or area defense against Soviets during 1960s and Safeguard or point defence came to an end with the ABM Treaty. Whereas the current SDI debate is based on twin track policy of Reagan Administration, there exists continuity between both the debates. SDI debate which is aimed to bring about structural changes in Soviet forces and at the same time pursue Arms control differs in its political content which is due to American policy making Elite-Arms controllers, strategic conservatives and fundamentalist.

ABM treaty, which aimed to bring strategic stability in the 1970s was seen as an end in itself, where as in the 1980s, it is seen as a means to an end, used as a weapon to extract concessions from the Soviet Union.

The only option, according to Croft, to SDI controversy is, the 'Broad' interpretation of ABM treaty, which is strictly based on U.S. interests. Though he ignores that re-interpretation is possible only through joint adoption both by Soviet Union and U.S., nevertheless, he gives us a very precise analysis of American thinking on SDI and ABM treaty.

"ABM treaty to survive, depends on the policies of each super power", is his forecast for the future of ABM treaty.

-- N B S

Letters to the Editor

Letters are invited on subjects which have been dealt in the Journal, or which are of general interest to the services.

Dear Editor,

I have come across a copy of your esteemed Journal, October - December 1988, containing the review of my book entitled "Trends in Pakistan's External Policy 1947 - 1971 : With Particular Reference to People's China". I am happy to see that the reviewer Brig Ramesh Chandra (Retd) has tried to offer an objective review of my book. You may please refer to my forecast about the problem of integration in residual Pakistan too (P. 180,195). Today's Pakistan is bleeding because of racial/lingual/sectarian differences among the Muslims themselves. One wonders where it would lead to. It would be too much to expect of Benazir Bhutto as she has to work under so many constraints and strains.

With kind regards,

Yours sincerely,

Sd/-

(Dr. Azizul Haque)
Jahangir Nagar University,
Savar Dhaka, Bangladesh

ADDITIONS TO THE USI LIBRARY FOR THE QUARTER ENDING JUNE 1989

ARMS TRANSFER

- | | | |
|--------------------------|---|------|
| 1. Orlson,
Thomas ed. | Arms transfer--Limitation and
Third World, New York,
Oxford University Press, | 1988 |
|--------------------------|---|------|

BIOGRAPHY

- | | | |
|-------------------------------|---|------|
| 2. Shankardas,
Rani Dhavan | Vallabhai Patel : Powers &
Organisation, New Delhi,
Orient Longman, | 1988 |
|-------------------------------|---|------|

COMPUTER SCIENCE

- | | | |
|--------------------|--|------|
| 3. Philippakis, AS | Structured Cobol, 3rd ed New York,
McGraw Hill, | 1986 |
| 4. -do- | Advanced Cobol, 2nd ed.,
New York, McGraw Hill, | 1987 |
| 5. -do- | Information System through Cobol,
2nd ed., New York, McGraw Hill, | 1978 |

ECONOMICS

- | | | |
|----------------|--|------|
| 6. Batra, Ravi | Surviving the great depression of 1990,
New York, Simon & Schuster, | 1988 |
|----------------|--|------|

HISTORY -- INDIA

- | | | |
|-------------------|---|------|
| 7. Sharma, Sima | India: The formative years,
Delhi, India International Centre, | 1989 |
| 8. Hamid, Shahid | Disastrous Twilight, London,
Leo Cooper, | 1986 |
| 9. Rizvi, SAA | Wonder that was India
London, Sidgewick & Jackson, | 1987 |
| 10. Kejariwal, OP | The Asiatic Society of Bengal.
Bombay, Oxford Univ Press, | 1988 |

11. Gopal Singh History of the Sikh People. 2nd ed,
New Delhi, World Book Centre, 1988

PAKISTAN

12. Choudhury,
Golam W Pakistan: Transition from military to
civilian rule, London, Scorpion Pubn, 1988

SRI LANKA

13. Dharamdasani,
MD, ed Sri Lanka: An Island in
Crisis, Varanasi, Shalimar 1988

GULF COUNTRIES

14. Khadduri, Majid Gulf War: Origins & Implications.
New York, Oxford Univ Press, 1988

15. Abidi, AHH, ed Tehran Documents, New Delhi,
Patriot Pub. 1988

SYRIA

16. Seale, Patrick ASAD of Syria: The Struggle for the
Middle East, London, IB Touris, 1988

INDIAN OCEAN

17. Das Gupta,
Ashin, ed India and the Indian Ocean 1500 - 1800,
Delhi, Oxford Univ Press, 1987

18. Misra, RN Indian Ocean and India's
Security, Delhi, Mittal Pub., 1986

INTERNATIONAL RELATIONS

19. Bandyopadhyaya, J Making of India's Foreign Policy,
2nd ed, New Delhi, Allied Pub., 1979

20. Palmer &
Perkins International Relations
3rd ed., Delhi, C.B.S. Pub., 1985

21. Morgenthau,
Hans J & Kenneth
W. Thompson Politics among nations
6th ed. New Delhi,
Kalyani Pub., 1985

- | | | |
|---------------------------------------|---|------|
| 22. Knightley,
Philip | Philiby; KGB Masterspy,
London, Andre Deutsch, | 1988 |
| 23. Jha, SK | Indo-Nepal Relations,
New Delhi, Archives Books, | 1989 |
| 24. ICSSR | Changing Perceptions of International
Relations, New Delhi, Lancer
International, | 1988 |
| 25. Kaul, TN | India, China & Indo-China.
New Delhi, McGraw Hill, | 1987 |
| 26. Dubey,
Ravi Kant | Indo-Sri-Lankan Relations,
New Delhi, Deep & Deep, | 1989 |
| 27. Hart, Thomas G | Sino-Soviet Relations,
Alder Shot, Gower, | 1987 |
| MILITARY SCIENCE | | |
| 28. Looney,
Robert E. | Third World Military Expenditure.
London, Macmillan Press, | 1988 |
| 29. Barnaby, Frank | Invisible bomb: Nuclear Arms Race,
London, IB Tauris, | 1989 |
| 30. Payne, James L | Why Nations Arm?
Oxford, Basil Blackwell, | 1989 |
| 31. Horam, M | Naga Insurgency: The last thirty years.
New Delhi, Cosmo Pub., | 1988 |
| NUCLEAR WEAPONS | | |
| 32. Subrahmanyam, K
& Jasjit Singh | Security without nuclear weapons.
New Delhi, Lancer International, | 1986 |
| SOCIOLOGY | | |
| 33. Goode,
William, J | Methods in Social Research.
New York, McGraw Hill, | 1986 |
| 34. Young, PV | Scientific, Social Surveys and Research,
4th ed. New Delhi, P-Hall, | 1966 |
| 35. Wilkinson &
Bhandarkar | Methodology & Techniques of Social
Research, Bombay, Himalaya Pub House, | 1984 |

JOIN USI Correspondence Courses And Plan Your Career

Courses run by the USI

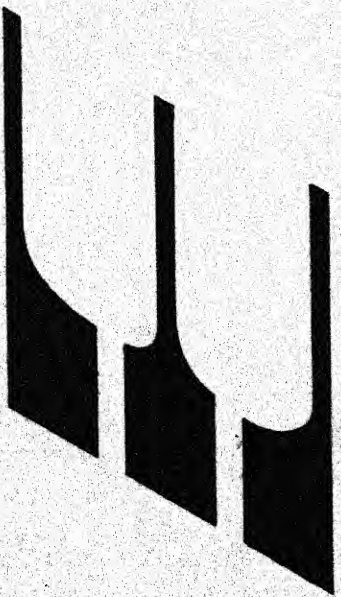
Courses	Dates		Fees *	
	Course commen- cement	Exa- mina- tion	All subjects (Rs.)	Each subject (Rs.)
1. DSSC Entrance Examination (Army)	Jul	Apr	500	100
2. DSSC Entrance Examination (Navy)	Jan	Jul		100
3. DSSC Entrance Examination (Air)	Jan	Jul	250	100
4. Technical Staff College Course (TSC) Entrance Examination (Combined examination for DSSC (Army) and TSC vide SAO/9/S/87 (Apr 90 onwards)	Jul	Apr	250	100
5. Promotion Examination Part D	Feb	Sep	350	80
6. Promotion Examination Part B	Jul	Feb	250	75
7. MSc Defence Studies (International Relations & National Security) Background materials for written examination.				100**

Life members are entitled to 10% concession on Tuition Fee.
Membership is not compulsory.

For further details write to the Chief Instructor,
UNITED SERVICE INSTITUTION OF INDIA
 Kashmir House, Rajaji Marg, New Delhi - 110 011 (Tele 3015828)

Quality. Technology. Innovation.

Bharat Electronics' new 3-pronged identity.



*A company synonymous with the state-of-the-art in electronics,
we are now poised for accelerated growth. Through a series of new
initiatives.*

*Starting with our vibrant new symbol. Embodying our commitment
to excellence on many fronts:*

Quality in all our activities.

Technology of our products and production processes.

Innovation in our R & D, for greater self-reliance.

*This is the thrust our new symbol represents... ushering in
an exciting future, taking off on our dynamic present.*

Bharat Electronics Limited

(A Government of India Enterprise)
Registered Office: Trade Centre
116/2, Race Course Road
BANGALORE-560 001